

**REPORT OF THE
VESTED FORESTS COMMITTEE 1975**

SUMMARY

In order to implement the provisions of the Kerala Private Forests (Vesting & Assignment) Act, 1971, the Vested Forests Committee was constituted and this is its report.

0.1. The terms of the Committee are to advise the Government on: -

(a) The suitability of lands for any of the purposes mentioned in rule 3 of the Kerala Private Forests (Vesting & Assignment) Rules, 1974.

(b) The extent of lands which are necessary for the purposes.

(c) The extent of land that may be assigned to individuals.

(d) The crop pattern suitable for the land to be assigned.

(e) Such other matters as may be entrusted to it by the Government (G.O. (MS). 50/75/AD., dated 22nd February 1975 – Annexure II).

0.2. The Committee traces the history of the lands comprised in the Vested Forests and briefly analyses the provisions of the Kerala Private Forests (Vesting & Assignment) Act, 1971, and the Kerala Private Forests (Vesting & Assignment) Rules, 1974, which provide the framework of the report (Chapter II).

0.3.

0.3.1 By 10th May, 1971, the date of effect of the Kerala Private Forests (Vesting & Assignment) Act, 1971, most of the desirable and accessible tracts of the erstwhile Private Forests has already been converted into settled areas exempted from the Act. What remains is mostly steep, rocky and remote beyond the margins of economic cultivation. But the constraints of policy have laid down that approximately 1/3 of the area should be assigned for cultivation. While making its recommendations, the Committee tries to strike the best compromises between the needs of conservation and the demands of land-hunger. (Para 3.1.4).

0.3.2.1 The Committee identifies certain settlement of Tribals within the Vested Forests. The committee however, notes that the majority of Tribals in the areas concerned lead a precarious existence in the shadow of Vested Forests. The Committee proposes the exclusive allotment of suitable stretches of lands comprised in Vested Forests in Wynad, Attappady and certain other areas for the settlement of Tribal populations as contemplated in the second proviso to rule 8 of the Kerala Private Forests (Vesting & Assignment) Rules, 1974. This is in addition to the percentage fixed for them in Rule 8 (c) which will apply in other areas.

0.3.2.2 The Committee describes the physical features (para. 3.2.1.), the influence of Vested Forests on climates (para. 3.2.4) and on river catchments and moisture regime, (paras 3.3.1 to 3.3.4). A brief description of the wooded areas and their classification into various types with recommendations about the principles to be adopted in preparation of Working Plans are indicated in paras. 3.4.1 to 3.4.4.

0.4 The policy dictate that approximately 1/3 of the available should be assigned for cultivation has compelled the Committee to include areas for assignment where the slopes are steep and where tree-cover is essential for maintenance of ideal ecological balance. The Committee therefore emphasises the following general precautions as the inescapable pre-condition before the commencement of cultural operations.

0.4.1 The Committee has located large blocks for assignment in which there are steep hills and patches with thin soil cover. The Committee recommends cashew as the only permissible crop in such areas. (Para. 3.6.1).

0.4.2. In most of the areas to be assigned, suitable soil conservation measures are absolutely essential as a necessary pre-condition. Gully plugging, tree crops, trees as far as possible being planted along the contours and special provisions for protection of catchments have been recommended. The Committee also recommends that, should a swamp or spring occur in an area to be assigned, it should be a condition that the assignee protects it to the satisfaction of a designated Engineer having jurisdiction in the area. (Para. 3.6.2.1 to 3.6.2.4).

0.5. The Committee has prepared a detailed list of areas suitable for assignment with recommendations on the crop pattern and other conditions of assignment including recommendation as to whether the area has to be assigned exclusively for Tribals. (Chapter IV and Annexure VI).

0.5.1 The Committee emphasises that the area are approximate and subject to measurement on completion of survey. The availability of these lands is also subject to the decisions of the Forest Tribunals.

0.5.2. The Committee has prepared certain sample schemes for utilisation of the lands (Para. 4.3.2 and Annexures IIIA to III K). The Committee makes special provisions for assignment to Tribals. Certain sample schemes for the utilisation of these areas including a scheme for a Dairy Community on the grass lands at Pookote in South Wynad Taluk, Kozhikkode District have been prepared (Para 4.4 and Annexure IIIC).

0.5.3. The Committee has located 7784 hectares suitable for sugar-cane cultivation. Subject to the decision of the Government on whether the cultivation can be entrusted to a Government company under Rule 3 (e) of the Kerala Private Forests (Vesting and Assignment) Rules, 1974, the committee recommends assignment subject to the conditions that the assignees from co-operative societies for joint farming of the areas. The committee has pointed out similar provisions in relation to the area at Aralam also (para 4.5).

0.6. The Committee has prepared list of areas proposed for reservation (Annexure VI). The purposes under Rule 3 which justify such reservation have been briefly mentioned in each case. The limitations mentioned in 0.5.1 apply also to these areas. (Paras 5.1 and 5.2 and Annexure VI).

0.7. The Committee makes certain suggestions for future management. A form of register to be kept by Tahasildars under Rule 27 (1) of the Kerala Private Forests (Vesting and Assignment) Rules, 1974, has been proposed. Tahasildars should personally inspect each of such lands at least once a year and attach an Annual Certificate incorporated in the proposed Register. (Paras. 6.1.1 and 6.1.2).

0.7.1. The Committee recommends the strengthening of the co-operative organisation in the State in order to effectively implement the provisions laid down in Rules 13 and 14 of the Kerala Private Forests (Vesting and Assignment) Rules, 1974. (Para 6.1.3.)

0.7.2. The Committee recommends that the primary responsibility of preparation and co-ordination of detailed Development Plans in regard to each compact block should be on the Revenue Divisional Officers concerned under the direct personal supervision of the District Collector.

0.7.3.1 The Committee recommends that all assignments to Tribals should be on lease (Para. 6.1.5.1).

0.7.3.2. The Committee recommends the close co-ordination and if necessary, recasting of Integrated Area Development Projects for Tribal Welfare in order to accommodate the increased holdings of land resulting from the assignment of areas in the Vested Forests. The Committee draws attention to certain schemes prepared by it for settlement of Tribal populations and recommends that the highest priority should be accorded for the preparation of similar schemes for each of the blocks proposed for such assignment (Para. 6.1.5.2)

0.7.3.3. The Committee recommends that the Special Officer, Tribal Welfare may be authorised to initiate action for the preparation and implementation of the schemes in area to be allotted to Tribals in anticipation of the procedural regularisation of assignment by the Collectors under the rules. (Para. 6.1.5.3)

0.7.3.4 The committee considers the welfare of the Tribal population resident in or dependent on Reserve Forests or Vested Forests to be a primary responsibility of the Forest Department and of the Government. This implies the general extension of benefits already enjoyed by the Tribal settlements in the Reserve Forests to those in the Vested Forests. (Para 6.1.5.4)

0.8.1. The Committee recommends the reconstitution of Forest Divisions and the preparation of Working Plans (Para 6.2.1 and 6.2.2).

0.8.2 The committee points out that transactions in regard to the Vested Forests must be kept separately. (Para. 6.2.3).

0.9. The Committee thanks the Officers of the Forest Survey, and the Soil Survey Wing of the Agriculture Department, the Central Plantation Crops Research Institute and the Indo-Swiss Project for their valuable assistance. The Committee records its gratitude to the Minsiter (Harijan Welfare and Community Development) and the Minister (Finance) who participated in all its meetings.

**Abstract of vested forests areas recommended
for reservation and assignment**

<i>Name of Divisions</i>	<i>Reservation (in Hectares)</i>	<i>Assignment (in Hectares)</i>	<i>Total (in Hectares)</i>
1	2	3	4
Tellicherry Division	8,558.97	7,087.85	15,646.82
Kozhikkode Division	30,078.00	14,861.20	44,939.20
Nilambur Division	30,116.00	11,052.97	41,168.97
Palghat Division	41,604.85	19,208.00	60,812.85
Total	1,10,357.82	52,210.02	1,62,567.84
T.C Area	277.00	6,567.00	6,844.00
Grand Total	1,10,634.82	58,777.02	1,69,411.84

Details vested forests in T.C. Area

<i>Divisions</i>	<i>Reservation (in Hectares)</i>	<i>Assignment (in Hectares)</i>	<i>Total area (in Hectares)</i>
1	2	3	4
Trichur	40.00 (*)1	530	570.00
Malayattur	--	43	43.00
Kottayam	130.00 (*)2	4,996	5,126.00
Thenmala	--	398	398.00
Devikulam	--	441	441.00
Ranni	107.00	144	251.00
Punalur	--	15	15.00
Total	277.00	6,567	6,844.00

(*) 1. Sandalwood area

(*) 2. Vedikkuzhi - 80 hectares

Jeerakakkad - 50 "

Total 130 hectares

Details of areas under different crops recommended in lands proposed for assignment in the vested forests (Area in hectares)

	Coconut	Cashew nut	Pepper	Cocoa	Rubber	Coffee	Cardamom	Fruit	Sugar-cane	Tapioca	Paddy	Miscellaneous
1	2	3	4	5	6	7	8	9	10	11	12	13
Tellicherry	1,604	1,185	1,805	97	762	1,558	594	--	--	3,090	176	--
Kozhikkode	4,955	1,176	5,328	6,635	817	5,255	1,438	--	--	2,000	1,070	--
Nilambur	1,717	1,749	100	--	40	--	--	--	7,446	845	1,100	
Palghat	3,438	4,064	2,520	129	1,286	--	--	332	830	2,530	1,361	411
Agali (Tribal Schemes)												5,841
	11,714	8,174	9,753	6,861	2,905	6,813	2,029	332	8,276	8,465	3,707	6,252

Total for all crops 75281 hectares (Gross area)

T.C.Area (Miscellaneous) 6567 hectares (Gross area)

Grand Total 81848 hectares (Gross area)

Note : The gross area under crops exceeds the area available because areas proposed for multiple crops, e.g. Coconut and Cocoa, Coconut and Tapioca, etc. have been included under each of them.

Areas proposed for assignment exclusively for tribals

	<i>Division</i>	<i>Range</i>	<i>Area in hectares</i>	<i>Total</i>
1.	Tellicherry	Mannantoddy	1,015.26	115.26
	-Do-	Kuthuparamba	100.00	
2.	Kozhikkode	Kalpetta	14,066.76	14,066.76
3.	Nilambur	Edavana	345.00	345.00
4.	Palghat	Thankara	428.00	7531.61
		Agali	7103.61	
		Total		<u>23,058.63</u>

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APPENDIX I
Cost of cultivation of sugar – cane planted

		Pair @ Rs.10	Man @ Rs.5	Woman @ Rs.4	Amount Rs.
I	Preparatory cultivation				
	Ploughing the field 4 times	20	---	---	200.00
	Ploughing two times after application of cattle manure.	5	---	---	50.00
	Taking ridges and furrows	---	30		150.00
	Taking irrigation channels	---	5		25.00
II	Manures and manuring				
	Cost of 5 tons of Compost	---	---	---	100.00
	Application of Compost	---	2	3	22.00
	Cost of 900 kg Am. 504, 400 kg. Super and 120 kg. MO. P.	---	---	---	1385.00
	Cost of application	---	5	2	33.00
III	Seeds and sowing				
	Cost of 25,000 seed sets at Rs. 20 per 1000	---	---	---	500.00
	Sowing seed sets	---	15	5	95.00
IV	Inter cultivation				
	Weeding, earthing up thrice	---	---	60	240.00
	Threshing, propping	---	5	35	165.00
	Spraying insecticides twice	---	9	---	45.00
V	Cost of chemicals	---	---	---	250.00
	Irrigation charges	---	---	---	450.00
VI	Harvesting Cane	---	32	50	360.00
	Transporting Cane	---	---	25	100.00
	Total				4170.00

	Rs.
Yield : 75 Ton/Hect. at Rs.90 per ton	6,750
Net profit	2,580

Subsequent 2 years 2 ratoons can be taken. The cost of cultivation per hectare per year will be Rs.3,500 and yield per hectare per year will be 70 tons.

ANNEXURE I
GOVERNMENT OF KERALA

Abstract

The Kerala Private Forests (Vesting and Assignment) Act, 1971 -
Implementation of - Committee - Constitution of - Orders issued.

AGRICULTURE (FOREST SPECIAL) DEPARTMENT

G.O.Rt.2624/73/AD Dated, Trivandrum, 28th November, 1973

Read:- G.O.Rt.5347/PD dated 19th October 1973

ORDER

Government are pleased to constitute a Committee which will be known as the Vested Forest Committee with the following members in connection with the implementation of the Kerala Private Forests (Vesting and Assignment) Act, 1971 creating the posts listed 4, 5 and 6 below, for a period of one year from them being filled in or till the work of the Committee is complete whichever is earlier.

- | | | |
|-----|---|------------------|
| (1) | Special Officer for the implementation of K.P.F (Vesting and Assignment) Act, 1971 | Chairman |
| (2) | Secretary to Government Revenue Department | Part-time Member |
| (3) | The Director, Survey and Land Records | Do. |
| (4) | An Officer from the Agriculture Department in the grade of Additional Director in the scale of Rs.800-1100 with a special pay of Rs.200 p.m. | Full-time Member |
| (5) | An Officer from Forest Department in the grade of Conservator of Forests in the scale of Rs.1000-1300 with a special pay of Rs.200 p.m. | Do. |
| (6) | An Officer from Engineering Department in the grade of Superintending Engineer in the scale of Rs.1000-1300 with a special pay of Rs.200 p.m. | Do. |
| (7) | An Officer from the Law Department | Part-time Member |
| (8) | An Officer from the Finance Department | Do. |

2. Full and Part-time members of the Committee will be nominated by the concerned Departments of Government.

3. The Committee will report to Government in the reservation of such extent of private forests as may be necessary for purposes directed towards the promotion of agriculture or the welfare of the agricultural research, farm forestry, irrigation, infra-structure etc. The Committee will also report on the land to be assigned, with the crop pattern etc. in such lands.

4. The Committee will take all steps to ensure that its report on the extent for reservation as in para 3 above of private forest to be reserved, reaches Government within four months after it commences work in the field. Proposals on the land to be assigned, with the crop patterns etc. in such lands should be submitted as early as possible thereafter.

5. The expenditure will be debited to “70 (b) (ii) forest consolidation and acquisition of Private Forests” 1973-74.

(By order of the Governor)
T. MADHAVA MENON,
Special Secretary to Government

To.

The Special Secretary, Agriculture (Forest) Department
The Special Secretary, P. W. Department
The Special Secretary, Finance Department
The Secretary, Agriculture Department
The Secretary, Revenue Department
The Chief Conservator of Forests (Dev)
The Director of Agriculture
The Chief Engineer (Buildings and Roads)
The Chief Conservator of Forests
The Conservator of Forests (Sp. Circle), Kozhikode
The Member, Board of Revenue.
The Public Department (S.C.) vide agenda item 0/A-I.

Forwarded/By order.
(Sd.)
Section Officer.

(True copy)

ANNEXURE II
GOVERNMENT OF KERALA

Abstract

The Kerala Private Forests (Vesting and Assignment) Rules, 1974 – Rules under section 17 of the Act - Constitution of the Committee under rule 4 – Orders issued.

AGRICULTURE (FOREST SPECIAL) DEPARTMENT

GO MS No. 50/75/AD

Dated, Trivandrum 22nd

February, 1975

- Read:-* 1. G.O.Rt.2624/73/AD dated 28th November 1973
2. Notification No.71470/FS.1/73/AD dated 23rd December, 1974

ORDER

In the G.O. read above, a Vested Forests Committee was constituted with the following members: -

- (1) Special Officer for the implementation of the Kerala Private Forests (Vesting and Assignment) - Act, 1971. (Chairman).
- (2) Secretary to Government, Revenue Department (Part-time Member)
- (3) The Director of Survey and Land Records (Part-time Member)
- (4) An Officer from the Agriculture Department in the grade of Additional Director (Full-time Member).
- (5) An Officer from the Forest Department in the grade of Conservator of Forests (Full-time Member) (Ex-officio).
- (6) An Officer of the Engineering Department in the grade of Superintending Engineer.
- (7) An Officer from the Law Department
- (8) An Officer from the Finance Department

The terms of reference of the Committee was that it will report to Government on the reservation of such extent of private forests as may be necessary, for purposes directed towards the promotion of agriculture or the welfare of the agricultural population or for purposes ancillary thereto including agricultural research, farm forestry, irrigation, infra-struction etc. The Committee will also report on the land to be assigned with the crop pattern etc. in such lands.

2. In the Notification read as second paper Government have now published the Kerala Forest (Vesting and Assignment) Rules, 1974 under the Kerala Private Forests (Vesting and Assignment) Act, 1971. Rule 4 lays down that the Government shall constitute a Committee to advise them in respect of:-

- (a) the suitability of lands for any of the purposes mentioned in rule 3;
- (b) the extent of lands which are necessary for any of the said purposes;
- (c) subject to the provisions of rules 7 and 8, the extent of land that may be assigned to individuals.

Explanation: Different extents of lands may be recommended for different areas and for cultivation of different crops.

- (d) the crop pattern suitable for the lands to be assigned;
- (e) such other matters as may be entrusted to it by the Government

3. In the circumstances, in supersession of the orders issued in the GO., read above, Government hereby constitute in pursuance of rule 4 of the Kerala Private Forests (Vesting and Assignment) Rules, 1974 a Committee called the Vested Forests Committee with the following members:-

(i)	The Special Officer for the implementation of the Act who shall be the Chairman	Full-time
(ii)	The Conservator of Forests, Special Circle, Kozhikode (Ex officio Member)	Do.
(iii)	Shri K. V. Abdul Azees, Superintending Engineer, Public Works Department	Do.
(iv)	Shri. O.V.Ummerkutty, Additional Director of Agriculture	Do.
(v)	Chief Conservator of Forests (Development)	Part-time
(vi)	The Secretary, Planning Board	Do.
(vii)	Shri.K.Viswanathan Nair, Additional Secretary to Government, Law Department	Do.
(viii)	Shri.P. George Zacharia, Joint Secretary to Government, Finance Department	Do.
(ix)	Director of Survey and Lands Records	Do.
(x)	The Secretary, Land Board	Do.
(xi)	District Collectors of Cannanore, Calicut, Malappuram and Palghat Districts	Do.

4. The expenditure will be debited to “313 (d)” which will be transfer credited to the Vested Forests Fund when created.

(By order of the Governor)
K. GOPALAN
Deputy Secretary to Government

To.

The Chairman, Vested Forests Committee
The Chief Conservator of Forests (Dev)
The Conservator of Forests (Special), Kozhikode
The Accountant General, Trivandrum
The Accountant General, Thrissur
The Finance Department
All members of the Committee
The Secretary, Board of Revenue
The Public Works Department
The Revenue Department
The Law Department
The Director of Agriculture
The Chief Engineer (Buildings & Roads)
The Public Department (SC)
The Planning Department
Stock File

Forwarded/ by order
(Sd.)
Section Officer

ANNEXURE III A

Preliminary project report on the colonisation scheme to be taken up at the Anthimalankadu vested forests area

The Anthimalankadu forest, covering an area of 175.38 hectares, situated about one kilometre to the west of Kulapully junction on the Shoranur-Calicut highway, was visited on 22nd August 1974 by Sri.K.V.Ahamed Bavappa, Director, Sri.E.V.Nelliat, Head of the Division of Agronomy, Sri.M.K.Muliyar, Extension Agronomist and Sri M.P.Sankaranarayanan, Junior Chemist, Central Plantation Crops Research Institute, Kasargod along with the Chairman and other officers of the Vested Forest Utilisation Committee of the Government of Kerala, with a view to prepare a suitable project for this area, proposed to be colonised by landless agricultural labour. The entire forest area was traversed by the party using for guidance, the contour, soil and land capability maps, already prepared by the Assistant Soil Survey Officer, Ottapalam. After inspecting the site, the officers of the two organisations had joint discussions on the working plan of the project.

In the light of the above the following recommendations are given :

1. The site is ideally suitable for starting a co-operative/collective farm for the settlement of agricultural labour after clearing the forest. Being situated on the highway in an industrial belt connected by rail, it will have considerable demonstration value as well.

2. The families to be settled on this land should be those with genuine interest in agriculture. The housing colonies will be located in such a way that each farmer will have his holdings within a kilometre distance from his residence. Each of the houses will have sufficient land around the residence for raising a kitchen garden and maintaining one or two milch animals and a small poultry unit. If irrigation facilities are found to be satisfactory, suitable area will be earmarked for raising fodder crops for milch animals and also for irrigating the coconut during the early years. The Community Centre will be located in the heart of the cleared forest in such a way that it will be easily accessible to all the housing colonies. The entire colony will be serviced by a co-operative society which will not only effect supply of all inputs required for agriculture including the know-how but also will arrange for the marketing of the produce.

3. The farming will be on co-operative/collective basis. Adequate finance, tapping different institutional supports should be available to the farmers.

4. It is also necessary to ensure that the capital as well as all other inputs including the technical know - how are made available under one roof at the proper time ensuring that they are properly utilised for the purpose for which it is granted.

5. For successful implementation of such a project, it is essential that the overall control and supervision of the scheme is vested with a Statutory body which can take up a number of such schemes in the Vested Forest areas.

6. The following broad outline for bringing the area under agriculture is suggested:-

(a) The soil survey report indicates that strong soil conservation measures are necessary to check soil erosion in this area. Since this operation is likely to be highly expensive, (at least about Rs.750 per acre) this may be taken up in a phased manner. Priority on this aspect may be given to filling up deep gullies with waste timber available locally and also plugging small gullies with provision for regulation of surface drainage and diversion channels to arrest the severe surface run off. The contour cultivation over a period of time will ensure that in course of time some sort of levelling up of fields will take place and by the time the full canopy of the perennial crops develop, it is expected that hazard due to soil erosion occurring during heavy rainfall will be reduced to the minimum.

(b) Kulappully (KIy) soil series is generally shallow and may not be suitable for crops like coconut. This area will be generally planted with cashew and fruit crops like mango, chikku, guava, pappaya, etc. Nedumgottur (Ngr) soil series which is fairly deep will be utilised for raising coconut plantation adopting either the single hedge or square system of planting with a view to intercrop with pepper.

(c) The entire area during the first few years will be utilised for raising annuals like tapioca, sweet potato, pineapple, vegetables and pulses. These will be raised on ridges / furrows formed across the slopes along the contour. Dry paddy will be raised on flat or nearly flat lands after providing strong contour bunds.

The detailed project report taking into account the land capability, crops/crop combinations that could be raised, etc. will be prepared when the proposal is accepted in principle.

Total estimated area available for cultivation

<i>Main crops</i>		<i>Inter crops</i>	
<i>Crop</i>	<i>Area (Ha.)</i>	<i>Crop</i>	<i>Area (Ha.)</i>
Coconut	50	Pineapple	30
Pepper	15	Banana	5
Cashew	25	Tapioca	40
Mango	40	Yam	10
Sapota		Ginger	15
Tamarind			
Guava			
Paddy	10		
Total	140	Total	100

Area and gross returns during the period stabilised yield

<i>Main Crop</i>	<i>Area (ha.)</i>	<i>Gross returns Rs.</i>	<i>Intercrop</i>	<i>Area (ha.)</i>	<i>Gross returns Rs.</i>
Coconut	50	3,10,000	Pineapple	30	2,34,000
Pepper	15	1,11,000	Banana	5	60,000
Cashew	25	14,000	Tapioca	40	76,000
Mango	40	40,000	Yam	10	42,300
Sapota			Ginger	15	94,650
Tamarind					
Guava					
Paddy	10	11,000			
Total	140	4,86,000	Total	100	5,06,950

(1) The cropping programme prepared by the C.P.C.R.I showed that a total of 140 hect. can be put under cultivation of perennials and annuals. Intercropping the same area to an extent of about 100 hect. with annuals like pineapple, tapioca, etc. are also envisaged. The gross income generated at the end of the gestation period i.e. after 12 years of commencement of the scheme is estimated at Rs.9.93 lakhs (this also includes the wages earned by the settlers).

If the holding size is to be based on the annual income of about Rs.5,000 per family this could support about 195 families. But the total employment potential per annum would be around 30,000 mandays. If every settler and his wife have to be provided work for about 200 days every year the total work days needed is about 80,000. It is therefore, necessary to decide whether the allotment of holding is to be based on the gross income from the area or on the employment opportunities offered to the settlers.

(2) Each family will have a homestead of about 0.10 hect. including area of house, kitchen garden, dairy, poultry farming etc.

(3) Before clear felling of the forest, it should be ensured that all formalities are over and the cropping programme has to be taken up immediately.

(4) Excepting the lowest strata, there is no perennial source of water for irrigation. Most of the crops suggested are perennials and would be highly benefited if some lifesaving irrigation could be provided during severe dry months. The possibility of constructing masonry tanks at the higher elevations and storing rain-water from the lower areas may be thought of in consultation with the State Hydrologist.

(5) Animal husbandry, dairy and poultry programmes may be thought of to the extent possible so as to augment the income of the settler through such activities. In case sufficient cowdung is obtainable the possibility of setting up gober gas plants can also be thought of.

(6) All the operations like construction of roads and footpaths, the land shaping etc. may be carried out employing the settlers so as to provide them subsistence employment from the early days.

(7) It will be obligatory on the part of every settler to be a member of the Co-operative Society.

(8) The Co-operative will take care of all the marketing of the produce and supply of inputs like fertilisers, agricultural chemicals, etc.

(9) Community amenities like electricity, schools, drinking water, community centres, etc. will have to be provided for homestead, which will, it is felt, be located in 2 or 3 colonies.

(10) As the capital investment for the proposed cropping pattern namely plantation crops is very large sufficient financial aid will have to be provided. A suggestion was that the settlers may be paid only 75 per cent of their wages, the balance being credited to their account.

(11) The Rules may be framed in such a manner that the cultivators, though have possession of the allotted unit will not have the right to transact the properties. The financial assistance may be given on the security of land, any of the investment adding to the value of security. In the event of deserting the property at any stage, the possession will go back to the Authority.

ANNEXURE III B

Feasibility report on the Pilot Scheme for the utilisation of the areas under the Private Forests vested with Government for agriculture purposes on Colonisation basis

Introduction

1.0. Under the Kerala Private Forests (Vesting and Assignment) Act, 1971 large areas of private forests have come to the possession of the Kerala Government. The main intention of taking over of these areas were for utilising them for the benefit of the agricultural community of this State. The utilisation of these private forests have to be decided upon taking into account the conservation of natural resources, the common benefit of the agriculture population and the overall agricultural productivity of the State. According to the Act after reserving the required areas for protective purposes and for the common benefits of the Agriculturists, certain areas are to be assigned to the Agricultural population of the State for growing crops. The Vested Forests Committee has been constituted for recommending to the Government the various ways in which the areas vested with the Government have to be utilised. In cases where lands are to be assigned to Agriculturists, suitable schemes can be formulated so that the maximum return from the lands and consequent benefit to the occupants could be achieved.

1.1. *Pullanimedu Area (Survey No.72)* - In Puthupadi Village in Kozhikode Taluk is an area in private forest now vested with the Government under the above Act. This area appear to be a suitable one for implementing a miniature Pilot scheme by colonising a limited number of agricultural families. The area is ideally situated at a distance of 34 km. from Calicut on the Calicut-Wynad Road and measures 75 hectares. The area is predominantly rubber growing and rubber estates are situated around. The preliminary inspection of the area indicated that a self-contained project could be implemented here. For examining the feasibility of the project, it was necessary to have a contour map and basic data on soil condition. The Assistant Soil Survey Officer of the State Soil Survey Organisation was requested to undertake a reconnaissance soil survey of the Pullanimedu area to ascertain the suitability of the land for agricultural purposes and to gather other scientific information on the soil resources of the area. The area was inspected by the Chairman along with the Member (Joint Director of Agriculture) and Assistant Soil Survey Officer, Calicut when all the

aspects of the project were discussed. The Assistant Soil Survey Officer conducted a survey of the area with reference to the soil condition and other aspects needed for the project and submitted his report. On the basis of the report, Pullanimedu area can be considered as an upland region of the Kozhikode Taluk, with undulating type of topography with steep slopes and narrow ridges. Most of the area has a slope gradient of 35 per cent which ranges from 25 to 50 percent. The altitude of the area is about 500 ft. The area is excessively drained due to its undulating type of topography. No rivers or streams are located in the site. There are exposed rocks at several points. The soils of the area are typical forest type and are deep with high content of organic matter. The depth vary considerably depending upon the proximity of rocky outgrowths. The area has very steep slopes with a fair distribution of boulders and rock fragments.

2. Land Utilisation

2.0. Pullanimedu is situated in a tract where rubber is the predominant crop. The area being undulating and situated at a higher level with steep slopes, it is considered that only tree crops are mainly cultivated. Out of the total extent of 75 hectares, 30 hectares of land come under rocky phase and 35 hectares are available for raising plantation. The remaining area of 10 hectares comes under shallow soils. An area of 25 hectares can be set apart for rubber and 5 hectares for cashew nuts. On the slopes subjected to soil erosion fodder grass can be grown. For the establishment of Housing Colony, annual crops, common amenities as playgrounds, Nursery Schools, etc. another 5 hectares have to be set apart. Sufficient protection against the soil erosion should be adopted as recommended by the Soil Conservation Wing of the Agriculture Department.

2.1. The proposal is to settle 20 Agricultural families in the area. The allocation of lands would be 1.25 hectares for rubber and 0.25 hectare for cashew and 0.25 hectare for annual subsistence crops, house sites, etc. per family.

2.2. There are rocky areas and steep slopes estimated at 30 hectares to be left without cultivation of any crops due to soil erosion hazards. Cattle rearing can be done in areas where crop growth is not possible. Fodder grass may be raised in suitable areas for feeding the live-stock maintained by the settlers and the surplus quantity could be disposed of in urban areas, nearby, where fodder scarcity is felt.

2.3. Suitable sites have to be located for housing and subsistence farming. The Chairman, Vested Forests Committee, Member, Vested Forests Committee (Joint Director of Agriculture) and Assistant Soil Survey Officer inspected the areas and have located two alternative sites (IA and IB marked in the map) which would be suitable for locating the housing sites where the farmers have to be settled. The main aspects taken into consideration in selecting the sites are the following:-

- i. Nearness to an established habitation (Village or Hamlet).
- ii. Nearness to a road
- iii. Availability of water.
- iv. Fairly level and fertile land.
- v. Availability of facilities like electricity.

Tentative lay out of 20 plots have been made. A detailed town and country planning survey is necessary before finalisation.

2.4. The main crop proposed to be raised is rubber and the majority of the area can be put under this. The rest of the area can be grown with cashew. It will be insisted that the following protective measures are adopted in planting the area.

(a) The planting will be done along the contour instead of adopting line planting.

(b) Since the area is over drained it will be necessary to control the run off. Safe disposal of the run off from the rainfall has to be planned to prevent soil erosion and gully formation.

2.5. Roads and other facilities – Necessary roads and foot paths will have to be provided for the settlers and for the transport of agricultural inputs, marketing of farm produce, etc. Minimum area will be provided for play grounds for children. A common cattle shed for all the colonists maintaining live-stock will have to be provided. The location for all these will be determined after detailed town and country planning survey.

2.6. During the inspections, it was noticed that there were scattered growth of rosewood indicating profuse regeneration in some areas. Care should be taken to preserve these growths in assigning areas for the various purposes mentioned above.

3. Welfare Measures

3.0. As observed by Justice Shri.V.R.Krishna Iyer, in his judgment, upholding the validity of the act, the object of the Land Reforms is not the mere redistribution of the land but it includes all the various measures intended to benefit the agricultural community. The following welfare measures should, therefore, form an integral part of the project.

3.1. Dairy Farming – It is proposed that each family maintains at least one cow, thus there will be about 20 cows and calves for the 20 families. This programme will be implemented with the help of the Animal Husbandry Department. There should be model cow-shed to be commonly managed for all the cattle. Fodder cultivation should be taken up to be collectively as pointed out in para 2.2 above. Excess fodder can be disposed in the nearby urban areas. The excreta of the cattle can be used for a Gobar Gas Plant under the scheme of the Kerala Khadi and Village Industries Board.

3.2. Playgrounds, creches, Nursery Schools: - Suitable areas have to be set apart for these purpose and financial and other assistance obtained from Social Welfare Board and similar organisations and the budget provision for these activities.

3.3. Beekeeping: - Is another side avocation that could be taken up. For this also, assistance and co-operation of the K.K. & V.I. Board can be availed.

3.4. Water Supply: - Water supply is the main aspect to be considered in locating the housing site. The advantage for the site marked as 1.B in the map is that water is available from a perennial spring inside the site which can be tapped. Detailed schemes for water supply can be prepared by the Public Health Engineering Department. Till then a draw-well and a tank for bathing can be easily constructed and a path leading to the same (water source) also could be traced.

3.5. Electricity: - When there is Gobar Gas, electricity may not be necessary. However, if it is necessary, extension can be obtained utilising funds made available to the Kerala State Electricity Board from the Rural Electrification Corporation.

4. Management

For a scheme of this magnitude, it is not safe to entrust the management to individuals. It should be on co-operative basis. So one of the conditions of the

assignment should be that all the assignees should be members of the Co-operative Society to be formed and no non-assignee can become a member of the Society. Bye-laws of the Societies will have to be carefully prepared to safeguard all the aspects mentioned above.

5. Finances

5.0. There is very little tree growth in the Pullanimedu area. Even firewood species are not available. What little tree growth exists should be protected; no significant revenue is expected from clear felling in this area. So finances should come from the Agriculturists Welfare Fund.

5.1. Capital cost for Settlers: -

	<i>Rs.</i>
1. Rubber planting – 26 hectares at the rate of Rs.100 per hectare ..	1,56,000
2. Cashew planting – 5 hectares at the rate of Rs.1,000 per hectare ..	5,000
3. Raising annual crops for subsistence farming – 5 hectares at the rate of Rs.1,000 per hectare ..	5,000
4. Grass area 30 hectares at the rate of Rs.1,000 per hectare including protection of slopes and soil ..	30,000
5. Initial funds for agricultural implements, etc. ..	10,000
6. Cattle shed for 20 cows and calves ..	10,000
7. Cost of 20 milch animals at the rate of Rs.1,000 each ..	20,000
8. Construction of houses (20 Nos.) including protection of sites ..	1,00,000
9. Roads, play grounds, etc. lump sum ..	50,000
10. Initial advance for share capital loan at the rate of Rs.100 per settler ..	2,000
Total ..	3,88,000

Rounded to Rs.4.0 lakhs.

Capital cost for facilities: - No estimate could be given without detailed investigation. Cost has got to be incurred for the following works.

1. Water supply arrangements.
2. Connection with main road including acquisition charges for private property if any.
3. Gobar Gas Plant
4. Electrification
5. Fodder baling press detailed project estimates for the above item will have to be prepared.

5.2. Sources: - Bulk of the funds will have to come from the Agriculturists Welfare Fund. Wherever possible soil conservation schemes will be adopted and funds derived from these schemes as admissible under the rules. For Cashew and Rubber all the aids offered by Government, Rubber Board, A.R.C. etc. should be availed of. Guarantees, initial deposits, etc. will be a charge on the Agriculturists Welfare Fund. The Co-operative Society will be charged with the responsibility of repayment of the loans.

5.3. Funds for the scheme for housing: - Low Income Group Schemes and one lakh housing schemes can be availed of initial deposits etc. can be met by A.W.F., repayment to be made by a charge on the Co-operative Society. Cost of school buildings, playgrounds etc. to be met from public funds under Social Welfare and Education Department budgets.

5.4. Dairy Farming and Beekeeping: - Aids from Dairy Development Department and Kerala Khadi and Village Industries Board will be made use of for the Dairy Development Schemes, Gobar Gas Plant and Beekeeping.

5.5. For electrification and water supply: - Rural electrification scheme and rural water supply scheme funds can be made use of beneficiaries contribution will be met from the A.W.F. through the Co-operative Society.

6. Special Remarks on the Co-operative Society contemplated.

6.0. It may be seen that the main agency for the programme will be the Co-operative Society of the assignees to be formed. This has to be obviously multi-purpose in character. All the assignees will be compulsorily members under conditions of assignment. In order to keep the Society viable and specific no non-assignee will be allowed to be a member.

6.1. *Share Capital Loan:* - It is proposed that a loan of Rs.100 per member be made available from Agriculturists Welfare Fund. This will be redeemable in, say, 10 years from against the dividends earned in the period.

6.2. *Scope of working of the Society :* -

A. The objects of the Society shall be as follows:-

- (1) To organise the fulfilment of plans for the production and sale in the farm and rational utilisation of land and manpower.

- (2) To stimulate and maintain the constructive initiative of the members in improving the organisation of common production and raising labour productivity.
- (3) To improve the working and living conditions of the members and encourage thrift, self help and co-operation among them.
- (4) To introduce mechanization and electrification wherever necessary for land reclamation.
- (5) To work for the better education of the collective farmers, drawing them into public activity and developing socialist emulation and
- (6) To satisfy more fully the growing material and cultural needs of the members.

B. For the attainments of the above objects the Society may:-

- (1) Undertake land improvements, minor irrigation, soil conservation, plant protection.
- (2) Purchase agricultural machinery.
- (3) Take up cattle rearing, poultry farming, beekeeping, etc.
- (4) Purchase seeds, fodder, manures, insecticides and pesticides required by the members.
- (5) Maintain houses for members, cattle sheds, godowns.
- (6) Start cottage and small scale industries.
- (7) Borrow funds from Government, Co-operative Financing Agencies and from other source approved by the Registrar of Co-operative Societies.
- (8) Provide credit facilities to members both in cash and kind.
- (9) Accept deposits from members and
- (10) Undertake such other activities as are conducive to the successful fulfilment of the objects of the Society.

6.3. *Economic and financial activities of the Society: -*

(1) In furtherance of the objects of the Society the Board of Directors may obtain Government lands assigned in favour of the members of the Society and undertake collective farming according to a scheme approved by the A.W.F. authority.

(2) The management and the members of the collective farm should ensure rational farming through its intensification and specialisation and priority development of the branches for which the best natural and economic conditions are available.

- (3) The management may undertake such activities as:
- (a) Cultivation of crops.
 - (b) Seed growing.
 - (c) Animal Husbandry
 - (d) Poultry farming and beekeeping.
 - (e) Cultivation of fodder
 - (f) Application of progressive production methods, land reclamation and chemicalisation of agriculture.
 - (g) Making the most efficient use of tractors and other agricultural machineries, draught livestock and productive live-stock, buildings and installations.
 - (h) Construction and maintenance of farm buildings and cultural establishments, dwellings and children's institutions, roads, water conservation and other installations.
 - (i) Enter into contractual relations with individuals or other organisations for setting up consumer stores for the benefit of the member and for arranging the sale of farm products and other articles produced by the members during off season and also for the purchase of machinery, live-stock etc., necessary for the common enterprise.

6.4. *Management* :- Until all shares are redeemed Agricultural Welfare Fund Authority should have the right to appoint the management executives.

ANNEXURE III C

Draft Proposals for Establishing a Dairy Colonisation Farm in South Wynad Taluk

1. **Location** : - In South Wynad Taluk at an altitude of 2400' extensive grass lands are available near Pookot lake between Lakkidi and Vythiri. About 812 acres of compact area comprising 360 acres of grass lands and 100 acres of arable land now remaining idle can be successfully utilised for organising a dairy colonisation farm on co-operative basis. This land is adjacent to the main road that connects Calicut with Kalpetta and is about 3 km south of Vythiri. More land are also available in the neighbourhood to take up expansion programme.

2. **Settlers** : - Hundred independent families can be settled in this land taking dairying as a means of livelihood. Each family will have 4 adult cows in the course of 4 years besides young and growing stock. 3 cows can be supplied to each farmer at an interval of 8 months within a total span of 2 years. The fourth will be one replaced by birth from farm raised heifer. The first 3 cows to be given should be either in early lactation or advanced stage of pregnancy. The settlers should be selected and taken to this land after assigning specific areas for their settlement and also cultivation, as detailed below:

- (a) The entire grassland covering an area of 360 acres will be set apart as a community pasture land managed by the Co-operative Society.
- (b) Each family may be given ownership not less than one acre of irrigated land, 50 cents for raising fodder and 50 cents for food crops, which will consist of 100 acres of arable land.
- (c) In addition each family have 10 cents each for constructing their home and cattle shed, which will require an additional 10 acres.

It may be seen from the above that as a whole 470 acres of land may be made available, after a survey to demarcate the requirements detailed above.

3. **Land preparation** : - After conducting a survey and locating suitable areas for different activities, the arable land may be assigned to individuals and the pasture land may be entrusted with their co-operation to be developed as a community pasture. In the course of first year the following activities have to be undertaken by utilising the labour force of the settlers.

Cultivation of fodder crops in 50 acres of irrigated land.

Cultivation of food crops in the arable land at the rate of 50 cents for each family.

Construction of houses, cattle shed, approach roads etc. providing irrigation and drinking water facilities.

Improving the grassland meant for community pasture, by fencing and fertilising if necessary.

4. Dairy Farming : - The first batch of cows may be given to the settlers after completion of the preliminary works (say after 6-8 months). It is expected by this time necessary fodder would have been raised, and the families settled to make use of the land resources. Thereafter at an interval of 8 months each family will be given one cow each. On the whole this farm will be able to support 520 cow units as detailed below.

For 100 families 400 adult cows.

For 80 two year old heifer.

For 90 one year old heifer

All male stock and those animals exceed the optimum stocking capacity will have to be removed from the farm failing which it will imbalance the resources of the farm to maintain the cow units it can support.

5. Milk Production : - The average milk production that can be expected from this farm has been reckoned as follows:

	<i>1st year</i>	<i>2nd year</i>	<i>3rd year</i>	<i>4th year</i>
No. of cows in the herd	130	260	300	400
Milk yield kg/daily	540	1,080	1,250	1,600
-Do- Monthly	16,200	32,400	37,500	48,000

The animals that will be kept in the farm will belong to improved breed with a lactation yield of 2000 litres.

The calving interval is taken at 16 months.

The female calves born out of the cows given is expected to calve after 30 months of birth.

6. Cost of milk production : - In terms of 2000 litres for one lactation with a calving interval of 16 months.

	<i>Rs.</i>
Cost of farm produced grass less labour used (20 .. tonnes) for 16 months per cow	400.00
Cost of 500 kg. of concentrates ..	600.00
Cost of feed supplements, veterinary aid, insurance, .. etc.	200.00

Indirect charges such as interest on investments, maintenance of cattle shed, depreciation, etc.	..	400.00
Total	..	1,600.00
Cost of one litre of milk excluding labour charges 2000 litres/1,600 Rs.	..	0.80

7. Fodder production : - The 360 acres of grassland now available when improved can support 200 cow units, and for the rest of 200 cow units not less than 50 acres of well irrigated land should be available for raising fodder. However it may be noted that the grassland will suffer during the summer season and so the fodder requirements of 400 units of cow will have to be satisfied by a combined effort of the grassland improvement programme and also establishment of cultivated fodder crops. The grassland, as already pointed out may be developed as a community pasture land through the agency of a Co-operative Society of the settlers. Each family will then have to raise cultivated fodder in an area of 50 cents by his own labour from an area of one acre which will have to be assigned to each family. One cow unit will require 15 tonnes of green fodder in an year. One acre of irrigated and well maintained fodder plot can maintain 4 cows; since 60 tonnes of green fodder can be produced from an acre per year.

8. Economics of Dairy Farming: - Taking into consideration the prevailing situations in the area now under study, it is estimated that to make a living in this farm a settler family should have an income of Rs.300 per month. This will be possible if he is able to produce 500 litres of milk in a month. To produce on an average of 500 litres of milk per month the farmer should keep 4 cows giving 2000 litres of milk in a lactation with a calving interval of 16 months (i.e. 125 litres per month per cow). The net income will then be as follows:

		<i>Rs.</i>
The cost of production of one litre of milk	..	0.80
The cost of production of 500 litres of milk	..	400.00
The selling price of milk/litre	..	1.40 (*)
The selling price of 500 litres of milk	..	700.00
Therefore the net gain is Rs.700.00 – Rs.400.00	..	300.00

(*) The SP of milk is fixed below the prevailing market rate as a safety measure to ensure steady market for the entire production from the farm.

9. Organisational set up :- A Dairy Colonisation Co-operative Society should be organised manned by competent persons.

Excepting the community pasture which may be run by the society, all other land, building, shed, animals, etc. may vest with the farmer.

Till such time that the settlers are able to set up their dairy farms, their services should be utilised for all kinds of preliminary work in the farms.

The settlers should also be provided with necessary inputs to start fodder cultivation and also cultivation of food crops.

A team of technical personnel should plan out, supervise and guide the settlers in all aspects of Animal husbandry, Fodder production, cattle management, milk marketing, etc.

The feasibility to keep and fatten the male calves for beef can also be examined at a later stage.

10. Land utilisation pattern suggested : - As detailed above not less than 470 acres may be set apart for dairy colonisation programme.

As far as possible the existing forests may be kept without any disturbance. At any cost the forest growth in steep areas and in wind belts should not be removed.

The steep faces of the hills should be planted with tree of economical value including fruit bearing trees. This will have an influence in improving the micro-climatic conditions of the farm.

Only land with less slope which is suitable for ploughing should be used for arable and intensive fodder cropping.

11. Phasing of the Programme : -

- (a) A survey should be conducted to earmark 360 acres of grassland, 100-110 acres of arable land and to lay out road in this area.
- (b) Settlers will have to be selected and formed into Dairy Colonisation Co-operative Society, after giving basic training.
- (c) Construction of buildings, roads, irrigation and drinking water supply facilities.
- (d) Land improvements including cultivation of fodder and food crops.
- (e) Distribution of cattle to the settlers.

ANNEXURE III D

Preliminary report on proposed Co-operative Dairy Farm

(Prepared by District Veterinary Officer, Palghat)

Site

The vested forest area at OMMALA – THUMBAPARA region. The area available is 2500 to 3000 acres. It is mostly grasslands with small pockets of uncleared forests. Moderately steep hills with narrow valleys cover the site. The soil is fairly rich. The elevation ranges between 2600' MSL to 3200' MSL at hill tops and 1700' MSL at valleys. There is heavy rainfall. There are many small perennial streams flowing scattered all over the region. A jeepable road is available 2 kilometers away from the site. The vast expanse of natural grazing lands is conducive for economic dairy farming.

It is proposed to settle down 500 tribal families in this region. Their source of income will be from dairy farming and allied activities. The object is to provide each family consisting of 3 to 5 members each, with a minimum income of Rs.500-750 a month. Since the Tribals are illiterate and novice in dairy farming, in the preliminary stages of the scheme and until the project is completely established, the complete control and management of the entire establishment will be vested with technical personnel deputed from the Departments of Animal Husbandry, Dairy Development Department, Co-operative Department etc. A co-operative of the Tribals will be organised simultaneously and when this organisation is well established and is capable of operating the project, the management and operation will be transferred to it. Only the skeleton technical staff who are essential for the maintenance of the project, will be retained after this period.

Out of the 500 families to be settled, 400 families will be provided with dairy cows. Their income will be derived exclusively from dairy farming. The remaining 100 families will be engaged in auxiliary works of the farm such as fodder cultivation, pasture management, hay making, handling of milk, transportation and other sundry works.

The families will be accommodated in ten settlements of fifty families each. These settlements are to be located near water resources and at different convenient spots in the region. Each settlement will have forty families engaged in dairy farming

and ten engaged in auxiliary activities. These settlements will be established in a phased manner at the rate of one settlement every six months. The period of maturity of the scheme will therefore be 5 years to 5½ years.

The settlement will be self sufficient with regard to water resources, housing and storage facilities of feed fodder etc., when the settlement is fully established. Within a period of six months each family engaged in dairy farming will own six cross breed dairy cows/she buffaloes, producing on a head an average of six litres of milk a day. These animals will be housed in pucca sheds in double row system, the rows being separated by a dwarf wall. The residential housing accommodation for a couple of families will be provided in each shed to facilitate better management and attention of their cows. Therefore each shed will house two families and fourteen cows. There will be twenty such sheds in each settlement. Apart from this two line houses, having five families in each will be made available for accomodating the families engaged in auxiliary works. A common milking shed to house fifty cows at a time, a feed store, and a milk receiving room and scullery will be constructed at a centrally located place, in the settlement. An overhead tank and water distribution system capable of supplying 20,000 gallons of water per day to the Unit will be made available. The water required to the settlement will be obtained by digging a pond nearby. Two small sheds providing facilities to store implements bullock-carts and to accommodate work bullocks will also be constructed. Sanitary arrangements and dung pits and rubbish collection pits will be provided.

The construction of a large reservoir and water resources providing the required quantity of water to all the settlements will not be feasible. It is therefore suggested to dig ponds of suitable size, close to the settlements. Each pond should be able to provide 20,000 gallons of water to the unit daily. A total number of ten such ponds would then be necessary.

Design and specification of buildings

Cattle shed :- The plinth area is 768 sq. feet of which 448 sq.feet will be required to house the animals. Residential accommodation to the two families owning the cows, will be provided at either end of the shed, the plinth area of each such accommodation having 160' each. A single line sketch of the shed and cross section is furnished. (not enclosed).

Line houses for labour families :- The plinth area proposed is 900 sq. feet per house to accommodate 15 families. A single line sketch is given (not enclosed).

Implement shed : - The plinth area proposed is 800 sq. feet.

Overhead Tank : - Capacity 20,000 – 25,000 gallons.

Dung pits: - The approximate quantity of dung available for collection from 280 cows in a month will be 84 tonnes. Two dung pits to collect this quantity of dung is to be provided at suitable spots.

Common Milking Shed, Store milk receiving Room : - The plint area suggested is 4000 sq. feet. The cows will be occupying 2000 sq. feet. The remaining space will be utilised for the other two purposes equally.

Implementation

When the construction works of the first settlement is completed, fifty families will be moved to the settlement. Particular care will be taken not to disturb the social attachments and other unique social habits of the tribals. Forty of these families will be provided with two cross-breed cows / she buffaloes each. The animals purchased and given will be young in early lactation and capable of producing 8 litres of milk on an average per day in 300 days of lactation. The ten families will be provided with employment (two members for each family) on monthly wages.

The second and third batches of two cows/she buffaloes each will be procured and supplied to the forty families at the third and sixth months after the supply of first batch. The care, management, milking and other aspects of farming will be closely supervised by Technical Officers during the initial stages and if felt necessary, later also.

The participants will be organised into a co-operative body. The milk produced in the initial stage will have to be marketed to the existing marketing organisation, since the quantity available will be less. It will not be economic to have a separate marketing establishment to handle small quantities of milk.

Feeding

The animals will be allowed to graze, for a minimum period of four hours a day. The rest of the roughage will be provided in the form of hay which would be made from the grass available. There will be proper management of pasture. The waste water, urine sewage etc. will be utilised to raise fodder crops such as maize and hybrid napier. This would be converted into silage and fed during summer months.

Since good quantity green grass is available, the quantity of concentrates can be reduced and the expenditure on this minimised. In the beginning it would be necessary to obtain balanced ready to feed concentrate feed from external sources. However after three or four settlements have been established small feed mixing units involving more manual labour can be set up.

The concentrates will be fed in the morning and evening. The possibility of procuring the locally available raw materials for concentrate feed and supplying to the families for powering and feeding to the animal will be explored. Similarly, efforts will be made to cultivate maize, tapioca, oil seeds, etc. in the projected area itself, without involving much soil disturbance.

Veterinary Aids

When the scheme is established in full the actual number of cows available in the project will be in the order of 2400 – 2800 cows and the progeny. Since these animals are good milkers and cross-breeds, timely and proper treatment of ailing animals among them is of great importance. In a dairy project of this magnitude, disease problems and emergent gynecological ailments will be quite common. Therefore it is necessary that a Veterinary Hospital providing adequate treatment facilities should be available in the project itself. This institution with adequate stock of medicines and equipments and laboratory facilities will be established in the initial stages of the implementation of the scheme, i.e. by the time the second settlement is established. This hospital will be in charge of a Veterinary Surgeon, who will be assisted by a Live-stock Assistant and attendant. The type design of the institution is furnished separately. The staff of the institution will be provided with rent free residential accommodation since their services would be requisitioned outside normal working hours, to attend the emergency cases. The institution will have in-patient facilities. The animals will be protected against contagious diseases.

Breeding of cows : - A breeding policy, suitable for increasing production of the progeny, and sustaining it will be evolved. Artificial insemination will be adopted for breeding the animals. An artificial insemination unit, maintaining three or four pedigreed exotic breeding bulls (Jersey or Holstein) will be established during the first year of the implementation of the scheme.

Isolation shed : - The animals ailing from suspected infectious or contagious disease will have to be housed separately to prevent spread of such diseases. An in-patient shed away from the settlement will be constructed.

Special Amenities to Families

Medical Aid :- Necessary medical aid to the people will be made available through an A.N.M. Centre.

Education : - The tribals are mostly illiterate. It is highly necessary to give necessary education to the parents and their children. This can be achieved through adult literacy classes in the case of parents. The establishment of an Upper Primary School, will provide education to children. The different classes need only be started in stages.

Recreation : - The project will provide play grounds, children's park and periodical film shows of informative nature.

Shopping Centre : - The Tribals will be provided with facilities to purchase their requirements of provisions, cloths, toilets and other articles from Co-operative Stores located in shopping centres. The shopping centres will also have licence for tea-shops, vegetable and meat stalls. They will sell articles only at controlled prices. The management of the project will have strict check on the licences with regard to the prices and the quality of the articles sold. This arrangement is necessary to prevent exploitation of the Tribals who are illiterates.

Communications : - The settlements will be connected by jeepable roads. Cart tracks will connect the paddocks to the different settlements. The residential area of the staff will be located at a suitable place within the easy reach of unit and will have good communication facilities. The exact length of roads can be assessed only after the sites for each settlement has been fixed. However, in a farm of 3000 acres extent, at least twenty kilometres road will be required.

Fencing : - The fencing of the entire area will involve a heavy expenditure. However it is necessary to fence the easily accessible approaches to prevent trespass of stray cattle and unwanted people. The safety of the installation and prevention of pilferage have to be ensured. The exact length of fencing requires further study of the site.

Conveyance: - Two vehicles will be necessary for conveyance of supervisory staff. In the initial stages when the quantity of milk produced is less, these vehicles (Jeeps) can be utilised for transporting milk to Agali with trailers.

For hauling fodder, manure etc. and to undertake agricultural operations the service of a tractor with trailer will be necessary. For transporting fodder to each settlement and removal of dung each settlement will have two bullock carts.

Additionally bicycles at the rate of two per settlement and two for the office and one for the Veterinary Hospital will be provided.

Electricity :- The buildings, in the settlements, office, residential area and main roads will be electrified, electric power will also be required for pumping water to storage tanks, for chilling plants, Veterinary Hospital and Artificial Insemination Centre. The exact expenditure involved for extension of mainline from nearest locality, the installation of pumpsets, transformers, line for street illumination, wiring of building requires further assessment of the concerned departments. However a lump sum provision has been furnished for electrification of each unit.

Installation of overhead tank and internal distribution of water : - To make available the required quantity of water to each settlement and the residential quarters, veterinary Hospital and other buildings overhead water storage tanks, pumpsets of sufficient horse power and internal distribution system have to be provided separately. Though the exact expenditure can be assessed only after the site for each settlement and residential area been located an approximate figure is furnished.

Procurement and supply of cows :- The total number of cows to be provided to 400 families will be in the order of 2400 during the course of five to five years and six months. About 1000 will be available for procurement from the project itself in batches from 33rd month onwards from the date of supply of the first batch. The cost will have to be procured in batches of 80 animals and 160 animals once in three months. When the farm is established fully the replacement of old and unproductive animals can be made, out of their progeny available. No procurement from outside will have to be made.

Feed Requirements

Roughage :- The quantity required on average for every three months is furnished. When the project is fully established, the annual requirement of green grass would be 17000-18000 tons per year. The roughage requirements can be obtained by grazing of animals, at least for a period of 4 hours a day. They can be stall fed during the rest of the day with green grass silage or shraw hay. If hay is to be fed 1/3 of the above

quantity will be equivalent in dry matter. By using waste water, urine sewage from each settlement, small fodder plots growing hybrid napier or other varieties of high yielding fodder would be cultivated. Dry crops like cholam, could be grown and converted into silage. The possibility of making hay from the grass already growing in the locality will be explored. The excess requirements if any can be obtained from other agricultural settlements proposed or from local agencies.

Concentrates :- The month-wise requirements of concentrates is furnished separately. Since green grass would be available for feeding the quantity of concentrates to be fed will be less. The total annual requirements of ready to feed concentrate feed, when the project is fully established will be 5930 to 6000 metric tons. The mixing of feed can be done in small hand operated grinders using the ingredients which are locally available. The raw materials required additionally can be purchased from Coimbatore District. The establishment of small grinding and mixing units will provide more employment opportunities.

Breeding programme and policy : - It is observed that pure breed exotic cattle introduced from temperate zones to tropics and sub tropic areas rapidly degenerate and the progeny having 75 per cent or more pure breed ancestry, fare less than the half breed. It is proposed to breed the animals in the project, in such a way as to obtain and maintain 5/6 or 62.5 per cent exotic ancestry. Artificial insemination using pure or 75 percent jersey germ plasew will be adopted. Assuming that the cows procured locally will 50 per cent pure breed, they will be breed with (75 per cent) jersey bulls. The resulting progeny will be 5/8 or 62.5 per cent exotic. This pure breed ancestry will be maintained by breeding it again with 62.5 per cent pure breed bull. The first batch of progeny of the cows purchased from unknown sources, will not reveal their hereditary backgrounds and therefore they will be eliminated from breeding programme unless they are found to possess extremely good phenotypical production capabilities. Strict selection controlled breeding and ideal management will be ensured.

Milk production : - The daily production of milk from the herd having 2400-2800 animals will be 14000 to 15000 litres a day (2/3 product and average 8 litres/animal). Necessary chilling and storage facilities will be provided for this in the project itself or in a central locality.

Marketing : - It may not be possible to find market in the neighbouring town for this huge quantity of milk. Separate milk processing will have to be established to process and market the surplus milk. In the initial stages the milk available will have to be marketed by local or nearby co-operative milk supply unless since it will not be economic to have a separate establishment to handle small quantities of milk.

Management of the Farm : - The project will be managed by officials drawn from technical departments, in the initial stages or till it is fully established. Later it will be entrusted with a managing body of elected / nominated members from a co-operative organisation of the Tribals settled. They will be provided with a skeleton staff of technical personnel for the maintenance of the project.

The staff for managing the project and implementation of programmes and policies will be drawn up from the following technical departments.

- (a) Animal Husbandry Department
- (b) Dairy Development Department
- (c) Agricultural Department
- (d) Co-operative Department
- (e) Public Works Department

The ministerial staff, drivers of vehicles and attendants will be selected from the first four departments.

Overall control over the implementation of the scheme, supervision and control of other staff will be vested with the project officer in the cadre of Deputy Director in Animal Husbandry Department. The project officer will be selected from the cadre of Deputy Director of the Animal Husbandry Department and deputed to head of the project.

He will be assisted by two Assistant Project Officers, Animal Husbandry, one Assistant Project Officer – Dairy – one Assistant Project Officer, Co-operation. These staff will be drawn from the respective departments on deputation. The Assistant Project Officer (Animal Husbandry) will be in the cadre of District Veterinary Officers, the Assistant Project Officer (Dairy) will be in the cadre of Assistant Director (Dairy Development) and Assistant Project Officer (Co-operation) in the cadre of Assistant Registrar (Co-operation).

To lead the veterinary hospital and the artificial insemination centre two veterinary surgeons will be posted. A reserve veterinary surgeon will also be available to attend to emergency cases outside the normal working hours.

To attend to herd management and other supervisory function, two other veterinary surgeons will also be employed.

To assist the veterinary surgeon in the hospital, artificial insemination centre and in farm management, five live-stock assistants will be employed. Three attendants will be required for the hospital and artificial insemination centre together.

To carry out agricultural operation, two Agricultural Assistants and one field man are proposed.

The services of one electrician will be required to attend in various electrical installation of the project.

The staff details are furnished below: The appointment of staff need be made at various progressive stages of completion of the project. When the project is completed the surplus staff will be withdrawn.

Staff Details

1.	Project Officer	..	One
2.	Assistant Project Officer (A.H.)	..	Two
3.	Assistant Project Officer (Dairy)	..	One
4.	Assistant Registrar (Co-operation)	..	One
5.	Veterinary Surgeon	..	Five
6.	Agricultural Assistants	..	Two
7.	Live-stock Assistants	..	Five
8.	Electrician	..	One
9.	Attendants	..	Three
10.	Watchmen	..	Three

Ministerial Staff

Accountant	..	One
Lower Division Clerks	..	Two
Lower Division Typist	..	One
Office Peons	..	Two
Drivers	..	Two
Driver – Tractor	..	One
Storekeeper	..	One

District Veterinary Officer
Palghat

Financial Requirements

	Non-recurring	For one settlement of 50 families
		Rs. P.
1.	Levelling and reclamation of land for construction of houses and cattle sheds	40,000.00
2.	Cost of digging water ponds to supply 20,000 gallons of water per day	50,000.00
3.	Construction of cattle sheds (23040 x 20) : 20 nos.	4,60,800.00
4.	Construction of two line houses with sanitary arrangements	60,000.00
5.	Installation of electricity	50,000.00
6.	Construction of overhead tank and internal distribution	40,000.00
7.	Construction of fodder milk handling unit and common milking shed	75,000.00
8.	Construction of two implement sheds	10,000.00
9.	Cost of two bullock carts.	6,000.00
10.	Utensils and dairy equipments @ Rs.400/family	16,000.00
11.	Cost of two pairs of work bullocks	4,800.00
12.	Cost of milk animals – 6 x 40, 240 x 2000	4,80,000.00
13.	Common roads and sanitary arrangements	50,000.00
	Total	13,42,600.00
		(13.5 Lakhs)

For the settlement: 134 lakhs

Veterinary Institutions and Artificial Insemination Centres

Construction of buildings for Veterinary Hospital with important facilities and Artificial Insemination Unit	50,000.00
Equipments and medicines	20,000.00
Residential quarters	30,000.00
Purchase of four jersey Br. bulls.	24,000.00
Total	1,24,000.00

Office Building

	Rs.	Ps.
Cost of construction of building:	50,000.00	
Residential quarters for staff:		
A 5 Nos. 25000	1,25,000.00	
B 7 Nos. 15000	1,05,000.00	
C 4 Nos. 7500	30,000.00	
D 8 Nos. 3750	30,000.00	
Total	2,90,000.00	

Conveyance:

1.	Tractor with trailer accessories	One	60,000.00
2.	Willys Jeep with trailer	One	40,000.00
3.	Van (1 ton)	One	45,000.00
4.	Bicycles	15 Nos.	5,000.00
	Total		1,50,000.00

Special amenities:

1.	Medical facilitations A.N.Ms.	One	20,000.00
2.	School (U.P.)		40,000.00
3.	Shopping Centre		30,000.00
4.	Play ground and recreation facilities		10,000.00
	Total		1,00,000.00

Other Construction works:

a.	Fencing (Lump sum)		1,00,000.00
b.	Isolation shed for (cows sick)		5,000.00
c.	Road common		5,00,000.00
d.	Common steel electrification		2,00,000.00
e.	Soil conservation		5,00,000.00
			13,05,000.00
	Milk storage and processing		10,00,000.00
	Central store		50,000.00
	Total		21,19,000.00+ 1,35,00,000.00
			1,56,19,000.00

Recurring Expenditure

	Rs.	Ps.
Annual:		
Salaries of staff project	2,00,000.00	
Maintenance of vehicles	30,000.00	
Maintenance of buildings	1,00,000.00	

Medicine and instruments	20,000.00
Special amenities:	
School – Salaries of staff	75,000.00
Medical care	22,000.00
Feeding charges 4 bulls	9,000.00
Travelling expenses	20,000.00
Contingencies & other expenses	1,00,000.00
Total	6,01,000.00 or 6 lakhs

Summary of Financial Outlay

		Rs. in lakhs
1.	Establishment of 10 Units	135.00
2.	Other construction works conveyance Social amenities	21.90
	Total	156.90
	Recurring expenditure : Annual	5.00
	for 5 years	25.00
		156.90
		30.00
	Total	186.90 or 188.00
	Capital cost and recurring expenses.	188.00
	Funds revolving at the disposal of project for purchase of feed fodder etc.	12.00
	Total	200.00

District Veterinary Officer
Palghat

ANNEXURES III E TO J
Project Report of the Proposed Collective / Co-operative Farm in Vested Forest Lands in Attappady

Introduction

The scheme is intended to rehabilitate 1500 families of Tribals, namely Irulas, Mudukas and Kurumbas of Attappady Block by giving an area of 2 Hectares net for each family for cultivating on a collective basis. Attappady Block is situated in eastern side of Mannarghat Block. The area of the Attappady Block is 765 sq. km with 116 hamlets of Tribals. Formerly these Tribals were cultivating in the forest lands by shift cultivation method. Due to increase of Tribal population and also by entrance of settlers from outside and strict action by the Forest Department against the shift cultivation, now the Tribals are accustomed to settled cultivation. Even though they have their own lands, due to lack of scientific knowledge of cultivation and lack of finance, they are not in a position to cultivate the land in a profitable way. Further these Tribals are cheated by the settlers and most of the lands of Tribals are now with the settlers.

The elevation of the Attappady range from 1200' to 3000' above M.S.L. Bhavani and Siruvani are two main rivers which drain the valley. Nilgiris are the northern boundary of Attappady while Muthikulam, Anakatty and Mannarghat lie to its south-eastern boundaries. The rainfall varies from 40" on the Coimbatore side to 200" in the dense evergreen forests in the western and southern parts of the valley. Anyhow the average rainfall is 67".

The total population of Attappady Block as per 1971 Census is 39,183 out of which 15,800 are Tribals. Out of this Adivasis, Irulas are the prominent, numbering 12,614 next comes Mudukas 2,370, Kurumbas 816.

Land Utilisation

Out of the total area of 76,500 hectares, 60,600 hectares are covered by forests. The barren uncultivable land will be about 2,500 hectares. The land put to non-agricultural purposes is 500 hectares. The net cultivable areas comes to 12,900 hectares. It is seen that only 150 hectares of lands are sown more than once. An area of 7,675 hectares are under single crops and 925 hectares are under cultivable waste current fallows.

Organisation of collective/ co-operative farm in the vergin forest area

As earlier stated, out of 69,600 hectares of forest land 17,176 hectares is nationalised private forests. An assessment of nationalised private forest lands by Forest Department shows that an area of 3,800 Hectares are fit for assignment. Among these 3,800 hectares suitable land for cultivation shall be made use of mainly in the rehabilitation of Tribal population of Attappady Block numbering 1500 families.

A thorough investigation has been made by the Joint Director of Agriculture, District Agriculture Officer, Assistant Director (Sugarcane Development) along the technical officers of other Department like Public Works Department (Buildings and Roads), Public Works Department (Minor Irrigation), Soil Conservation, Co-operation, Veterinary, Dairy Development, Forest, Block officials of Attappady Block and Assistant Development Commissioner, Palghat and the following sites were selected for rehabilitating Tribal families.

An abstract of locality, area and number of families to be rehabilitated is given below:

Abstract of area selected and number of families to be rehabilitated

	Name of locality	Total area (in hect)	Area for roads and buildings	Area for settling the tribals	No. of families to be settled	Area of homestead plot	Area of joint cultivation
	1	2	3	4	5	6	7
1.	Karuvara	300	30	270	135	27	243
2.	Chindakki	140	20	120	60	12	108
3.	Pothuppadi	440	40	400	200	40	360
4.	Kottamala and Chundakulam	160	20	140	50	10	130
5.	Varadimala	440	40	400	200	40	360
6.	Inchikunnu	440	40	400	200	40	360
	Total	1,920	190	1,730	845	169	1,561

1. Kuruvvara (Annexure III E)

The site is situated on road side of Mukali-Silent Valley Road about 8 km away from Mukkali. A tributary of Bhavani is flowing through this area which is having perennial supply of water. This area lies on the either side of the above stream for a length of 6 km. The rainfall is available in both South-west and North-east

monsoon with an annual rainfall of 120". The total area available is 300 hectares. Out of which 30 hectares are earmarked for roads, office buildings, etc. So the balance area of 270 hectares can be allotted to 135 families at 2 Hectares per family including the homestead plot of 0.2 hectare. So a family will get a homestead plot of 0.2 hectare for their home and independent cultivation and 1.8 hectares for collective cultivation. In the Homestead plot 0.2 hectare, 0.05 hectare may be for his home. 0.05 hectare for fruit plants and 0.1 hectare for vegetable cultivation.

Out of the total area of 270 hectares, 27 hectares are for Homestead plots of 135 families and 243 hectares are available for joint cultivation. This 243 hectares can be put under different crops as follows. The cost of cultivation of each crop per acre are given in the appendix.

Details of Crops

1. 43 hectares - Paddy followed by jowar
 2. 100 hectares - Jowar followed by pulses
 3. 50 hectares - Ragi followed by jowar
 4. 50 hectares - Maize with mixed crop of red gram
- Total net area - 243 hectares

Gross area of crops of joint cultivation and its costs of cultivation

Name of crop	Gross area Hect.	Cost of cultivation Rs.	Yield Tons	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Paddy	43	58,840	60	94,000	35,160
2. Jowar	190	1,91,520	152	3,04,000	1,12,480
3. Ragi	50	61,650	40	80,000	18,350
4. Maize	50	62,000	50	1,05,500	43,000
5. Pulses	100	79,600	50	1,25,010	45,400
6. Red Gram	.	5,000	12.5	25,000	20,000
Total	433	4,58,610	364.5	7,33,000	2,74,390

(The cost of cultivation of red gram as a mixed cropping is the cost of seed and harvesting charge).

In addition to the above, cultivation expenses of vegetables and fruit plants in homestead plot are to be met for the first year of settling by Department.

1.	The area under vegetable cultivation in 137 Homestead plots @ 0.1 hect.	13.7 hect.
2.	Area of fruit plants @ 0.05 hect. per home	6.75 hect.
3.	Cost of cultivation of 13.7 hect. @ Rs.1,750	Rs.23,600
4.	Cost of fruit plants and planting charges in 6.65 hectares @ fruit plants worth Rs.30 per family	30 x 135 = Rs.4,050
	Therefore gross cultivation charges in Karuvara	Rs.4,86,260.00
	Gross income excluding the income of Homestead plots	Rs.7,33,300.00

The details of cultivation and income for 10 years in Karuvara

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	4,86,260	7,33,000	2,46,740
2 nd year	4,58,610	7,33,000	2,74,390
3 rd year	4,58,610	7,33,000	2,74,390
4 th year	4,58,610	7,33,000	2,74,390
5 th year	4,58,610	7,33,000	2,74,390
6 th year	4,58,610	7,33,000	2,74,390
7 th year	4,58,610	7,33,000	2,74,390
8 th year	4,58,610	7,33,000	2,74,390
9 th year	4,58,610	7,33,000	2,74,390
10 th year	4,58,610	7,33,000	2,74,390

2. Chindakki (Annexure III F)

This site is situated 8 km away from Mukkali junction on the side of Bhavani River. The elevation is 1500' above M.S.L. The rainfall is about 100". The total area available is 140 hectares out of which 20 hectares are earmarked for roads and buildings. The balance area is 120 hectares in which 60 family can be settled. The area for homestead plot will be 12 hectares and area for joint cultivation will be 108 hectares. The soil is very fertile of black humus. A tributary of Bhavani is running through the site which is supposed to be of perennial nature. The slope in 60 hectares lying very near to the stream is very gentle and by constructing a Vier, 60 hectares can be cultivated with flow irrigation. Now paddy, millet, grains are being cultivated. If the Vier is constructed, sugar-cane and paddy can be cultivated in this 60 hectares.

The following cropping pattern is suggested for the above 108 hectares of joint cultivation.

1. 40 hectares .. Sugarcane
2. 20 hectares .. Paddy followed by paddy (Gross 40 hecets.)
3. 20 hectares .. Ragi followed by Jowar
4. 28 hectarers .. Jowar mixed Red gram

Cost of cultivation of each crop is given in the appendix

Gross area of crops of joint cultivation and its cost of cultivation

Name of crop	Gross area (hects.)	Cost of cultivation Rs.	Yield Tons	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Sugar cane	40	1,66,800	3,000	2,70,000	1,03,200
2. Paddy	40	80,000	80	1,24,000	44,000
3. Ragi	20	24,660	16	32,000	7,340
4. Jowar	48	48,384	38	76,800	28,416
5. Red gram mixed crop		2,800	7	17,500	14,700
Total	148	3,22,644	3,141	5,20,300	1,97,516

(The cost of cultivation of Red gram as a mixed crop is the cost of seed and harvesting charges only. The yield @ 250 kg. per hect.)

In addition to the above cultivation expenses of vegetables and cost of fruit plants in the homestead plots are to be met by Department for the first year of settling.

1.	area under vegetable in homestead plots @ 0.1 hect.	6 hectares.
2.	Area under fruit plants @ 0.05 hect.	3 hectares.
3.	Cost of cultivation of 6 hectares. vegetables @ Rs.1,750	Rs.10,500
4.	Cost of fruit plants worth Rs.30 per family	Rs.1,800
	Therefore gross cultivation charges in first year	Rs.3,35,000
	Gross income excluding income from Homestead plots	Rs.5,20,300

Details of cost of cultivation and income for 10 years in Chindaki

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	3,35,000	5,20,300	1,85,300
2 nd year	3,22,644	5,20,300	1,97,656
3 rd year	3,22,644	5,20,300	1,97,656
4 th year	3,22,644	5,20,300	1,97,656
5 th year	3,22,644	5,20,300	1,97,656
6 th year	3,22,644	5,20,300	1,97,656
7 th year	3,22,644	5,20,300	1,97,656
8 th year	3,22,644	5,20,300	1,97,656
9 th year	3,22,644	5,20,300	1,97,656
10 th year	3,22,644	5,20,300	1,97,656

3. Pothupadi (Annexure III G)

The site is situated about 8 km from Goolikadavu starting from Kallekkad extending upto Pothupadi. The elevation is about 2000' to 2,500' above M.S.L. The soil is very fertile and full of humus. The rainfall is about 100" covering both South-West and North-East monsoons. The site is situated on the upper portion of Attappady Valley Project Catchment area. Power supply can be given from Agali directly (7 km) or from the Dam site which is 4 km. from the area. From the Goolikadavu to the Dam site, Public Works Department is constructing a road and from there, there is a kutcha estate road 6 km in length which is to be maintained properly.

The total area available is 440 hectares. Out of which 40 hectares may be set apart for roads, buildings, etc. 200 families can be settled in the area of 400 hectares in which 40 hectares may be earmarked for homestead plots and 360 hectares for joint cultivation. This 360 hectares are having thick forest with shade trees which are suited for Cardamom cultivation. As the Cardamom cultivation will not affect existing forest wealth, it is suggested to put the entire area under Cardamom. Out of 360 hectares 10 hectares which is very near to the tributary of Siruvani which is of perennial nature and being plain can be set apart for Cardamom nursery. The remaining 350 hectares can be planted with main crop of Cardamom within 3 years.

i.e. 1st year .. 100 hectares
 2nd year .. 100 hectares
 3rd year .. 150 hectares

The cost of cultivation and economics of 350 hectares of Cardamom cultivation for 10 years is given below:

Cost of cultivation of Cardamom

Particulars	Men at Rs.5	Women at Rs.4	Amount Rs.
1	2	3	4
First year			
1. Clearing the undergrowth	50	10	290.00
2. Cutting pegs of 75 cm (1,600 pegs)	5	..	25.00
3. Alignment and pegging	10	..	50.00
4. Preparation of footpaths	30	..	150.00
5. Digging 1,600 pits of 75 cm x 75 cm x 30 cm	80	..	400.00
6. Filling the pits with forest soil	..	64	256.00

Particulars	Men at Rs.5	Women at Rs.4	Amount Rs.
1	2	3	4
7. Uprooting the seedlings from Nursery and transporting	2	8	42.00
8. Cost of seedlings including nursery charges	..	..	500.00
9. Planting, seedling, staking	7	10	75.00
10. Mulching with dried leaves	..	10	40.00
11. Weeding twice at 30 women / weeding	..	60	240.00
Total	184	162	2,068.00
Income	-	-	Nil
Second Year			
1. Weeding first round in May-June	..	35	140.00
2. Second weeding in August – September	..	30	120.00
3. Forming basin around the plant	75	..	375.00
4. Maintenance of footpaths, roads, etc.	20	..	100.00
5. Spraying	4	..	20.00
6. Cost of chemicals	..	..	25.00
7. Shade regulation	5	..	25.00
8. Maintenance of fire belt	15	..	75.00
9. Filling up gap about 160 seedlings after taking basins, transport of seedlings, etc.	3	5	35.00
10. Cost of 8 tonnes of organic manure @ 5 kg per plant including application charges	..	..	400.00
Total cost of cultivation	112	70	1,435.00
Third year:-			
1. Thrashing in May-June and weeding	..	60	240.00
2. Second weeding in August –September	..	30	120.00
3. Clearing footpaths, roads	20	..	100.00
4. Shade regulation	5	..	75.00
5. Spraying	15	..	75.00
6. Cost of materials	..	..	100.00
7. Harvesting 6 rounds	..	25	100.00
8. Curing charges	..	..	25.00
9. Providing fire belt	15	..	75.00
10. Cost of 8 tonnes of organic manure including application charges	..	..	400.00
Total cost of cultivation	55	115	1,310.00
Income of 40 kg of dry pods @ Rs.50			2,000.00
Fourth year			
1. Thrashing, weeding in June	..	65	260.00
2. Second weeding in August-September	..	30	120.00
3. Cleaning footpaths	20	..	100.00
4. Shade regulation	5	..	75.00
5. Plant protection	15	..	75.00

Particulars	Men at Rs.5	Women at Rs.4	Amount Rs.
1	2	3	4
6. Cost of materials	..	..	125.00
7. Cost of manure and application charges (40:80:80)	..	..	900.00
8. Harvesting green Cardamom – 6 rounds	..	60	240.00
9. Curing	..	..	100.00
10. Filling up gaps	5	..	25.00
11. Removal of Katte affective plants	5	..	25.00
12. Fire belt care	15	..	75.00
	65	155	2,120.00
Income of 60 kg of dry pods @ Rs.50	..	..	3,000.00
Net profit	..	..	880.00
Fifth year:			
Cost of cultivation (same as 4 th year)	..	..	2,160.00
Income of 70 kg of dry pods @ Rs.50	..	..	3,500.00
Net profit	..	..	1,340.00

6th year to 10th year the expenditure and income are the same as fifth year.

In addition to the above, the cultivation expenses of vegetables and cost of fruit plants in the homestead plots are to be met by department for the first year of settling.

1.	Area under vegetables in homestead plots of 200 families @ 0.1 hectare	20 hectares
		Rs.
2.	Cost of cultivation of 20 hectares @ Rs.750	35,000
3.	Cost of fruit plants worth Rs.30 per family	6,000
Cost of cultivation for the first year:		
1.	The cost of cultivation of cardamom in 100 hectares in first year @Rs.2,068 per hectare	2,06,800
2.	Cost of cultivation of vegetables and fruit plants for homestead plots	41,000.00
	Total expenditure for first year	2,47,800.00
	Income	Nil
Cost of cultivation of 2nd year:		
1.	cost of cultivation of 100 hectares of planted in the previous year @ Rs.1315	1,31,500.00
2.	Cost of cultivation of 100 hectares of fresh planting @ Rs.2,068	2,06,800.00
	Total cost of cultivation for 2 nd year	3,38,300.00
	Income	Nil
Cost of cultivation of 3rd year:		
1.	Cost of cultivation of 200 hectares planted in previous years @ Rs.1,315	2,63,000.00
2.	Cost of cultivation of fresh planting of 150 hectares	3,10,200.00

	@ Rs.2,068	
	Total cost of cultivation	5,73,200.00
3.	Total income for 3 rd year for 100 hectares of 3 rd year crop 40 kg. of dry pod per hectare	2,00,000.00
Cost of cultivation for 4th year:		
1.	Cost of cultivation of 350 hectares @ Rs.1,315 per hectare	4,60,250.00
2.	Income:	
	(a) Income for 100 hectares of 1 st year planting @ 60 kg of dry pods	3,00,000.00
	(b) Income from 100 hectares of 2 nd year planting @ 40 kg per hectare	2,00,000.00
	Total Income	5,00,000.00
Cost of cultivation for 5th year:		
1.	Cost of cultivation of 350 hectares @ Rs.1,315 per hectare	4,60,250.00
2.	Income:	
	(a) Income from 1 st year planting of 100 hectares @ 70 kg per hectare	3,50,000.00
	(b) Income from 2 nd year planting of 100 hectares @ 60 kg per hectare	3,00,000.00
	(c) Income from 3 rd year planting of 150 hectares @ 40 kg.	3,00,000.00
	Total Income	9,50,000.00
Cost of cultivation for 6th year:		
1.	Cost of cultivation of 350 hectares @ Rs.1,315 per hectare	4,60,250.00
2.	Income:	
	(a) Income from 200 hectares of 1 st & 2 nd year planting @ 70 kg per hectare	7,00,000.00
	(b) Income from 150 hectares of 3 rd year planting @ 60 kg per hectare	5,25,000.00
	Total Income	12,25,000.00
Cost of cultivation for 7th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00
Cost of cultivation for 8th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00
Cost of cultivation for 9th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00
Cost of cultivation for 10th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00

Details of cost of cultivation and income for 10 years in Pothupadi in 350 hectares

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	2,47,800.00	Nil	Nil
2 nd year	3,38,300.00	Nil	Nil
3 rd year	5,73,200.00	2,00,000.00	Nil
4 th year	4,60,250.00	5,00,000.00	39,750.00
5 th year	4,60,250.00	9,50,000.00	4,89,750.00
6 th year	4,60,250.00	12,25,000.00	7,64,750.00
7 th year	4,60,250.00	12,25,000.00	7,64,750.00
8 th year	4,60,250.00	12,25,000.00	7,64,750.00
9 th year	4,60,250.00	12,25,000.00	7,64,750.00
10 th year	4,60,250.00	12,25,000.00	7,64,750.00

4. Kottamala and Chundakulam (Annexure III H)

This area is situated on the eastern side of Siruvani River in the hamlets of Kottamala and Chundakulam which is 4 km from Goolikadavu. There is a kutch road to this area and only a cause-way at Moochikkadam is to be constructed. The electricity can be tapped either from Agali or Attappady Valley Project dam site. The rainfall is 60".

The total area available is 160 hectares. Out of which 20 hectares may be set apart for roads and buildings. Balance area is 140 hectares. Since the area is suitable only for dry crops, and as the out-turn is very much limited each family can be given @ 7 acres (2.8 hectares) including homestead plot. 50 families can be settled here in this 140 hectares. The area for homestead plot is 10 hectares and for joint cultivation is 130 hectares.

The crops that can be grown are given below:

1. 70 hectares – Groundnut followed by jowar.
2. 60 hectares – Maize followed by horsegram

The rotation may change according to the availability of rain and demand of tribals. The cost of cultivation of each crop is given in the appendix.

Gross area of crops of joint cultivation and its cost of cultivation

Name of crop	Gross area (hects.)	Cost of cultivation Rs.	Yield Tons	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Ground nut	70	1,05,000	70	1,40,000	35,000
2. Jowar	70	70,000	56	1,12,000	42,000
3. Maize	60	74,460	60	1,20,000	45,600
4. Horsegram (Pulses)	60	48,000	30	75,000	27,000
Total	260	2,97,400	216	4,47,000	1,49,600

	Rs.
Cultivation expenses for 1 st year for vegetables homestead plot in 5 hect. vegetable and fruit plants at Rs.30 per family	9,250.00
Gross cost of cultivation for 1 st year	3,06,650.00
Total income	4,47,000.00

Details of cost of cultivation and income for 10 years in 130 hectares in Kottamala and Chundakulam

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	3,06,650	4,47,000	1,40,350
2 nd year	2,97,400	4,47,000	1,49,600
3 rd year	2,97,400	4,47,000	1,49,600
4 th year	2,97,400	4,47,000	1,49,600
5 th year	2,97,400	4,47,000	1,49,600
6 th year	2,97,400	4,47,000	1,49,600
7 th year	2,97,400	4,47,000	1,49,600
8 th year	2,97,400	4,47,000	1,49,600
9 th year	2,97,400	4,47,000	1,49,600
10 th year	2,97,400	4,47,000	1,49,600

5. Varadi Mala (Annexure III I)

This area is in Sholayar Village which is situated 6 km south-west of Sholayar. The elevation 3,000' to 4,000'. The rainfall is 60". An area of about 440 hectares will

be available near the Siruvani group of estates. There is a kutch estate road of 8 km leading from Sholayar. This is to be realigned and reformed. Water facilities are available from Varagampadi stream. The electricity can be tapped from Kulukkur which is 12 km from the site. Part of the area is thick forest with fertile soil. Out of this 440 hectares, 40 hectares may be set apart for roads and buildings and 40 hectares for homestead. and 360 hectares for joint cultivation. 200 families can be settled here. Out of this 360 hectares, 220 hectares are situated in thick forest area, cardamom can be cultivated i.e. 210 hectares main crop and 10 hectares of nursery. The remaining 140 hectares can be put under coffee. The cropping pattern and its economics are appended.

1. 210 hectares – Cardamom (planted in first year)
2. 140 hectares – Coffee (2nd year)

The cost of cultivation of cardamom is already given and the cost of cultivation of coffee is given in the appendix.

Cost of cultivation and income for 10 years

		<i>Rs.</i>
First year:		
a.	Cost of cultivation of 210 hectares of cardamom @ Rs.2,068 per hect.	4,34,280
b.	Cost of cultivation of 20 hect. of vegetables in homestead plot and cost of fruit plants for 200 families	41,000
	Total	4,75,280
	Income	Nil
2nd year:		
a.	Cost of cultivation of 210 hectares of cardamom at Rs.1,315 per hect.	2,76,150
b.	Cost of cultivation of 140 hectares of coffee @ Rs.2,700 per hect.	3,78,000
	Total	6,54,150
	Income	Nil
3rd year:		
a.	Cost of cultivations 210 hectares of cardamom at Rs.1,315 per hect.	2,76,150
b.	Cost of cultivation of 140 hectares of coffee (2 nd year) at Rs.900 per hect.	1,26,000
	Total	4,02,150
c.	Income from cardamom @ 40 kg per hect.	4,20,000
4th year:		
a.	Cost of cultivation of 210 hectares of cardamom	2,76,150
b.	Cost of cultivation of 140 hectares of coffee (3 rd year) at Rs.900	1,26,000

	Total cost of cultivation	4,02,150
c.	Income from 210 hect. of cardamom @ 60 kg per hect.	6,30,000
5th year:		
a.	Cost of cultivation of 210 hect. of cardamom @ Rs.1,315	2,76,150
b.	Cost of cultivation of 140 hectares of coffee (4 th year) @ Rs.1200	1,68,000
	Total cost of cultivation	4,44,150
c.	Income:	
	(a) Income from cardamom @ 70 kg per hectare	7,35,000
	(b) Income from 140 hectare of coffee @ 300 kg per hectare	1,68,000
	Total Income	9,03,000
6th year:		
a.	Cost of cultivation of 210 hectares of cardamom	2,76,150
b.	Cost of cultivation of 140 hectares of coffee @ Rs.1,200	1,68,000
	Total cost of cultivation	4,44,150
c.	Income:	
	(a) Income from 210 hect. of cardamom @ 70 kg	7,35,000
	(b) Income from 140 hectare of coffee @ 500 kg per hectare	2,80,000
	Total Income	10,15,000

The expenditure and income from 7th year to 10th year is the same as in the case of 6th year.

**Details of cost of cultivation and income for 10 years
in 400 hect. area in Varadimala**

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	4,75,280	Nil	Nil
2 nd year	6,54,150	Nil	Nil
3 rd year	4,02,150	4,20,000	17,850
4 th year	4,02,150	6,30,000	27,850
5 th year	4,44,150	9,03,000	4,58,850
6 th year	4,44,150	10,15,000	5,70,850
7 th year	4,44,150	10,15,000	5,70,850
8 th year	4,44,150	10,15,000	5,70,850
9 th year	4,44,150	10,15,000	5,70,850
10 th year	4,44,150	10,15,000	5,70,850

6. Inchikunnu (Annexure III J)

This area is situated in Pottassery Village in Mannarghat Taluk in the western side of Attappady Hills. This site is about 11 km from Kanjirapuzha dam site. The area available is about 440 hectares which is almost uncleared. 40 hectares may be set

apart for roads and buildings. In the remaining 400 hectares available for cultivation, 200 families can be settled. In the 400 hectares, 40 hectares may be earmarked for homestead plots and 360 hectares for joint cultivation.

In the upper portion of this 360 hectares, 110 hectares can be put under cardamom, where there is thick forest. In the remaining 250 hectares, 150 hectares can be put under rubber and 100 hectares under coffee.

During the first year 100 hectares can be put under coffee. In the 2nd year, 150 hectares of rubber may be planted. In the third year the remaining area of 110 hectares can be put under cardamom.

The cost of cultivation of cardamom, coffee and rubber is given in the appendix.

Cultivation expenses and income in year-war for 10 year is given below.

		Rs.
First year:		
1.	Cost of cultivation of 100 hectares of coffee (1 st year) @ 2,700 per hectare	2,70,000
2.	Cost of cultivation of 20 hectare of vegetables in homestead and cost of fruit plants @ Rs.30 per family	41,000
	Total	3,11,000
3.	Income	Nil
2nd year:		
1.	Cost of cultivation of 100 hectares of coffee (2 nd year) @ 900 per hectare	90,000
2.	Cost of cultivation of 150 hectares of rubber @ Rs.1800 per hectare	2,70,000
	Total	3,60,000
	Income	Nil
3rd year:		
1.	Cost of cultivation of coffee in 100 hect. (3 rd year) @ 900 per hectare	90,000
2.	Cost of cultivation of 150 hect. of rubber (2 nd year) @ Rs.900 per hectare	1,35,000
3.	Cost of cultivation of 110 hect. of cardamom (first year) @ Rs.2,008 per hectare	2,27,480
	Total	4,52,480
4.	Income	Nil
4th year:		
1.	Cost of cultivation of 100 hect. of coffee (4 th year) @ 1,200 per hectare	1,20,000

2.	Cost of cultivation of 150 hect. of rubber (3 rd year) @ Rs.950 per hectare	1,42,500
3.	Cost of cultivation of 110 hect. of cardamom (2 nd year) @ Rs.1,315 per hectare	1,44,650
	Total	4,07,150
4.	Income from 100 hect. of coffee (4 th year) @ 300 kg per hectare	1,20,000
5th year:		
1.	Cost of cultivation of 100 hect. of coffee (5 th year) @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (4 th year) @ Rs.1,100 per hectare	1,65,000
3.	Cost of cultivation of 110 hect. of cardamom (3 rd year) @ Rs.1,315 per hectare	1,44,680
	Total	4,29,650
4.	Income from 100 hect. of coffee (5 th year) @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of cardamom @ 40 kg per hectare (3 rd year)	2,20,000
	Total income	4,20,000
6th year:		
1.	Cost of cultivation of 100 hect. of coffee (6 th year) @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (5 th year) @ Rs.1,400 per hectare	2,10,000
3.	Cost of cultivation of 110 hect. of cardamom (4 th year) @ Rs.1,315 per hectare	1,44,650
	Total expenditure	4,74,650
4.	Income for 100 hect. of coffee (6 th year) @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of cardamom (4 th year)@ 60 kg per hectare	3,30,000
	Total income	5,30,000
7th year:		
1.	Cost of cultivation of 100 hect. of coffee (7 th year) @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (6 th year) @ Rs.1,550 per hectare	2,32,500
3.	Cost of cultivation of 110 hect. of cardamom (5 th year) @ Rs.1,315 per hectare	1,44,650
	Total	4,97,150
4.	Income from 100 hect. of coffee @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of cardamom (5 th year)@ 70 kg per hectare	3,85,000
	Total income	5,85,000
8th year:		
1.	Cost of cultivation of 100 hect. of coffee @ 1,200 per hectare	1,20,000

2.	Cost of cultivation of 150 hect. of rubber (7 th year) @ Rs.3,000 per hectare	4,50,000
3.	Cost of cultivation of 110 hect. of cardamom @ Rs.1,315 per hectare	1,44,650
	Total	7,14,650
4.	Income from 100 hect. of coffee @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of rubber (7 th year)@ 400 kg per hectare	3,00,000
6.	Income from 10 hect. of cardamom @ 70 kg. per hectare	3,85,000
	Total income	8,85,000
9th year:		
1.	Cost of cultivation of 100 hect. of coffee @ Rs.1,200 per hect.	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (8 th year) @ Rs.3,300 per hectare	5,70,000
3.	Cost of cultivation of 110 hect. of cardamom @ Rs.1,315 per hectare	1,44,650
	Total	8,34,650
4.	Income from 100 hect. of coffee @ 500 kg per hectare	2,00,000
5.	Income from 150 hect. of rubber (8 th year)@ 700 kg per hectare	5,25,000
6.	Income from 110 hect. of cardamom @ 70 kg. per hectare	3,85,000
	Total income	11,10,000
10th year:		
1.	Cost of cultivation of 100 hect.of coffee @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (9 th year) @ Rs.4,000 per hectare	6,00,000
3.	Cost of cultivation of 110 hect. of cardamom @ Rs.1,315 per hectare	1,44,650
	Total	8,64,650
4.	Income from 100 hect. of coffee @ 500 kg per hectare	20,00,000
5.	Income from 150 hect. of rubber (9 th year)@ 900 kg per hectare	2,75,000
6.	Income from 110 hect. of cardamom @ 70 kg. per hectare	3,85,000
	Total income	12,60,000

**Details of cost of cultivation and income for 10 years
in Inchikunnu**

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	3,11,000	Nil	Nil
2 nd year	3,60,000	Nil	Nil
3 rd year	4,52,480	Nil	Nil
4 th year	4,07,150	1,20,000	Nil
5 th year	4,29,650	4,20,000	Nil
6 th year	4,74,650	5,30,000	55,350
7 th year	4,97,150	5,85,000	87,850
8 th year	7,14,650	8,85,000	1,70,350
9 th year	8,34,650	11,10,000	2,75,350
10 th year	8,64,650	12,60,000	3,95,350

The details of Capital Expenditure is given below:-

		<i>No.</i>	<i>Amount Rs.</i>
1.	Office of the Deputy Director	1	50,000
2.	Office of the District Agricultural Officer	4	1,60,000
3.	Godowns one at Agali and 4 at each District Agricultural Office	5	1,50,000
4.	Garage for tractor, jeep & lorry	10	1,00,000
5.	Office equipment, furniture, etc.	..	50,000
6.	Residential quarters for the agricultural staff	50	10,00,000
7.	Cost of one lorry, 4 tractors with trailers and 5 jeeps	10	5,00,000
8.	Farm implements for Tribals	..	50,000
	Total		20,60,000
The above expenditure is to be met in the first two years.			
	1 st year		12,60,000
	2 nd year		8,00,000

The staff pattern for implementing the agricultural programme for the proposed collective farm is given below.

1. Deputy Director of Agriculture .. 1 post

He will be in overall charge of the scheme with head quarters at Agali. The staff for his office is as follows.

- (a) Technical Assistant .. 1
- (b) U.D.Clerk .. 1
- (c) L.D.Clerks .. 2
- (d) L.D.Typist .. 1
- (e) Peons .. 2
- (f) Jeep Driver .. 1
- (g) Watchman .. 1
- (h) Lorry Driver .. 1
- (i) Mechanic .. 1

2. For effective supervision and administration, the whole area may be divided into 4 units each unit being under the control of one District Agricultural Officer.

The 4 units are as follows:-

- (a) Chindaki and Karuvara 390 Hectares
- (b) Pothupadi, Chundakulam and Kottamala 500 "
- (c) Varadimala 400 "
- (d) Inchikunnu 400 "

In the Office of the District Agricultural officer, the staff pattern will be as follows :-

- (a) District Agricultural officer 1
- (b) U.D. Clerk 1
- (c) L.D. Clerk 1
- (d) L.D. Typist 1
- (e) Peon 1
- (f) Jeep Driver 1
- (g) Tractor Driver 1

For effective technical supervision of the programme each District Agricultural Officer will be assisted by 2 Junior Agricultural Officers and 4 Demonstrators (Grade II) for field work.

Total Staff Pattern

		Deputy Director's office	District Agricultural Office	Total
1.	Deputy Director of Agriculture	1	--	1
2.	District Agricultural Officer	---	4	4
3.	Junior Agricultural Officers	1	8	9
4.	U.D. Clerks	1	4	5
5.	L.D. Clerks	2	4	6
6.	L.D. Typists	1	4	5
7.	Peon	2	4	6

8	Jeep Driver	1	4	5
9	Lorry Driver	1	--	1
10	Tractor Driver	--	4	4
11	Watchman	1	--	1
12	Agricultural Demonstrator (Grade II)	--	16	16

Note : The details of staff and scale of pay is given in Appendix XI.

Details of Establishment and Contingencies for 10 years

1st year.

(a)	Pay and allowances of the staff	2,75,000
(b)	Traveling Allowances	75,000
(c)	Contingencies including cost of petrol diesel etc.	<u>1,00,000</u>
	Total	<u>4,50,000</u>

2nd Year :

(a)	Pay and allowances	2,76,200
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,51,000</u>

3rd Year :

(a)	Pay and allowances	2,76,900
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,51,900</u>

4th Year :

(a)	Pay and allowances	2,77,600
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,52,600</u>

5th Year :

(a)	Pay and allowances	2,78,300
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,53,300</u>

6th Year :

(a)	Pay and allowances	2,79,000
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,54,000</u>

7th Year :

(a)	Pay and allowances	2,79,700
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,54,700</u>

8th Year :

(a)	Pay and allowances	2,80,500
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,55,500</u>

9th Year :

(a)	Pay and allowances	2,81,300
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,56,300</u>

10th Year :

(a)	Pay and allowances	2,82,100
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,57,100</u>

**Abstract of cost of cultivation and other expenditures and receipts for 10 years
(Rs. in '000)**

Year	Cultivation expenses	Capital expenses	Establishment charges and contingencies	Total expenditure	Receipts from farm produce
1 st	2,222	1,260	450	3,932	1,700
2 nd	2,431	800	451	3,682	1,700
3 rd	2,506	800	452	2,958	2,320
4 th	2,348	800	453	2,801	2,950
5 th	2,413	800	453	2,866	3,973
6 th	2,458	800	454	2,912	4,470
7 th	2,480	800	455	2,935	4,425
8 th	2,698	800	456	3,154	4,825
9 th	2,818	800	456	3,274	4,050
10 th	2,448	800	457	2,905	5,200

APPENDIX I
Cost of cultivation of sugar – cane planted

		Pair @ Rs.10	Man @ Rs.5	Woman @ Rs.4	Amount Rs.
I	Preparatory cultivation				
	Ploughing the field 4 times	20	---	---	200.00
	Ploughing two times after application of cattle manure.	5	---	---	50.00
	Taking ridges and furrows	---	30		150.00
	Taking irrigation channels	---	5		25.00
II	Manures and manuring				
	Cost of 5 tons of Compost	---	---	---	100.00
	Application of Compost	---	2	3	22.00
	Cost of 900 kg Am. 504, 400 kg. Super and 120 kg. MO. P.	---	---	---	1385.00
	Cost of application	---	5	2	33.00
III	Seeds and sowing				
	Cost of 25,000 seed sets at Rs. 20 per 1000	---	---	---	500.00
	Sowing seed sets	---	15	5	95.00
IV	Inter cultivation				
	Weeding, earthing up thrice	---	---	60	240.00
	Threshing, propping	---	5	35	165.00
	Spraying insecticides twice	---	9	---	45.00
V	Cost of chemicals	---	---	---	250.00
	Irrigation charges	---	---	---	450.00
VI	Harvesting Cane	---	32	50	360.00
	Transporting Cane	---	---	25	100.00
	Total				4170.00

	Rs.
Yield : 75 Ton/Hect. at Rs.90 per ton	6,750
Net profit	2,580

Subsequent 2 years 2 ratoons can be taken. The cost of cultivation per hectare per year will be Rs.3,500 and yield per hectare per year will be 70 tons.

APPENDIX II
Paddy broadcast (Cost of cultivation per hectare)

		Pair @ Rs. 10	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
I	Preparatory cultivation				
	Ploughing 4 times	20	---	---	200.00
	Trimming bunds and earthing up	---	3		15.00
II	Manures and manuring -				
	Cost of 10 cart loads of organic manures	---	---	---	100.00
	Cost of fertilizer @ 40:20:20 i.e 40 kg., 20 kg., 20kg/Hect.	---	---	---	350.00
	Application of manures and fertilizing	---	2	4	26.00
	Covering the fertilizer	3	---	---	30.00
III	Seeds and sowing				
	Cost of 80 kg. of seed @ Rs. 2/kg.	---	---	---	160.00
	Sowing and covering the seeds	3	1		35.00
IV	After cultivation				
	Weeding twice	---	---	40.00	160.00
	Plant protection	---	---	---	150.00
V	Irrigation				
	Diverting water wherever necessary and preparing bunds etc.	---	5	---	25.00
VI	Harvest				
	Harvesting, threshing, drying	---	20	30	220.00
	Total cost of cultivation	26	31	74	1471.00

	Rs.
Yield : Grain 1500 kg. @ Rs. 1.50/kg.	--- 2,250.00
Straw 2000 kg. @ 5 paise/kg.	--- <u>100.00</u>
Total	--- <u>2350.00</u>

Net Profit --- 879.00

In the case of transplanted crop, the cost of cultivation will come to Rs.2,000 per hectare and the yield will be 2000 kg./hect.

Transplanted crop

		Rs.
Cost of cultivation	:	2,000.00
Yield : Grain 2000 kg. @ Rs. 1.50/kg.	:	3,000.00
straw 2000 kg. @ 5 p./kg.	:	100.00
Total income	:	3,100.00
Net income	:	1,100.00

APPENDIX III
Ragi (Cost of cultivation per hectare)

		Pair @ Rs. 10	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
I	Preparatory cultivation				
	Ploughing 4 times	20	---	---	200.00
II	Seeds and sowing				
	Cost of 10 kg. of seeds @ Rs. 3.50	---	---	---	35.00
	Sow	---	2	---	10.00
	Covering the seed	2	---	---	20.00
II	Manures and manuring				
	Cost of 25 cart load of cattle manures @ Rs.10	---	---	---	250.00
	Application	---	2	2	18.00
	Cost of chemical fertilizers 18 kg. N or 18 kg P205 and 18 kg. K20 i.e. 200 kg. of 9-9-9 Mixture	---	---	---	280.00
	Application of chemical fertilizers	---	1	---	5.00
IV	After cultivation				
	Thinning and weeding, hoeing	---	---	25	100.00
	Harvesting, threshing, drying etc.	---	---	30	120.00
	Total	22	5	57	1,038.00

		Rs.
Cost of 800 kg. of Ragi at Rs. 2/kg.	---	1600.00
Net Profit	---	562.00/hect.

APPENDIX IV
Cholam/hect. (Cost of cultivation)

		Pair @ Rs. 10	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
I	Preparatory cultivation				
	Ploughing 4 times	20	---	---	200.00
II	Manures and manuring				
	Cost of 25 cart loads of cattle manures	---	---	---	250.00
	Cost of 15 kg. N., 28 kg P205 and 14 kg. P205.	---	---	---	275.00
	Application of manures and covering	---	2	2	18.00
III	Seeds and sowing				
	Cost of 15 kg. seeds @ Rs.3	---	---	---	45.00
	Sowing and covering the seeds	1	1	---	15.00
IV	After cultivation				
	Hoeing ,weeding	---	---	25	100.00
	Harvesting, threshing, drying	---	5	20	105.00
	Total	21	8	47	1,008.00

		Rs.
Cost of 800 kg. of Grain at Rs.2/kg.	---	1600.00
Cost of 2000 kg. of straw	---	<u>100.00</u>
Total	---	<u>1,700.00</u>
Net Profit	---	<u>592.00</u>

APPENDIX V
Maize (Cost of cultivation)

		Pair @ Rs. 10	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
I	Preparatory cultivation				
	Ploughing 4 times	20	---	---	200.00
II	Manures and manuring				
	Cost of 15 cart loads of organic manures	---	---	---	250.00
	Cost of 30 kg. N., 30 kg P, 30 kg. K. per hectare	---	---	---	400.00
	Application of manures and fertilizers	2	2	5	50.00
III	Seeds and sowing				
	Cost of 15 kg. of seeds @ Rs. 4/kg.	---	---	---	60.00
	Dibbling and covering seeds	---	2	5	30.00
IV	After cultivation				
	Weeding, thinning and hoeing	---	---	25	100.00
V	Harvest				
	Harvest, threshing and bagging	---	10	25	150.00
	Total	22	14	60	1,240.00

	Rs.
Yield : Grain 1000 kg. @ Rs. 2	--- 2000.00
Straw 2000 kg.	--- <u>100.00</u>
Total income	--- <u>2,100.00</u>
Net Profit	--- <u>860.00</u>

APPENDIX VI
Pulses (black gram, horse gram, etc.)

		Pair @ Rs. 10	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
I	Preparatory cultivation				
	Ploughing 3 times	15	---	---	150.00
II	Manures and manuring				
	Cost of 500 kg of lime	---	---	---	150.00
	Cost of 10 kg. N., 25 kg P	---	---	---	200.00
	Application of manures and fertilizers	---	2	4	26.00
III	Seeds and sowing				
	Cost of 20 kg. of seeds Rs. 3	---	---	---	60.00
	Sowing and covering seeds	1	2	---	20.00
IV	Plant protection				
	Cost of 15kg. of gammexane	---	---	---	30.00
	Harvesting, threshing, drying	---	---	40	160.00
	Total	16	4	44	796.00

		Rs.	
Yield : Gram 500 kg. @ Rs.2.50	---		1250.00
Net Profit	---		<u>454.00</u>

APPENDIX VII
Vegetables, Brinjal, Bhendi, Tomato etc. (Cost of cultivation)

		Pair @ Rs. 10	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
I	Preparatory cultivation				
	Ploughing 2 times	10	---	---	100.00
	Digging and forming beds or ridges and furrows	---	25	---	125.00
II	Manure and manuring				
	Cost of 23 cart loads of organic manure	---	---	---	250.00
	Cost of 35 kg. N., 50 kg P., 25kg. K.	---	---	---	525.00
	Application of fertilizers and manures	---	3	---	15.00
III	Seeds and sowing				
	Cost of seeds (400 grams for brinjal, tomato etc., 100 kg for bhendi, etc.)	---	---	---	15.00
	Laying out nursery	---	---	---	100.00
	Transplanting seedlings	---	4	15	80.00
IV	After cultivation				
	Seeding and earthing up (2 times)	---	30	30	290.00
	Irrigation (wherever possible in the case of irrigated crop)	---	---	30	120.00
	Plant Protection work	---	---	---	20.00
	Cost of P.P. Chemicals	---	---	---	50.00
	Harvesting	---	---	10	40.00
	Total	10	70	90	1,750.00

	Rs.
Yield of green vegetables 4000 kg. @ 75P/kg.	--- 3,000.00
Net Profit	--- <u>1,250.00</u>

APPENDIX VIII
Red gram (Cost of cultivation of pure crops)

		Pair @ Rs. 10	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
I	Preparatory cultivation				
	Ploughing 2 times	10	---	---	100.00
II	Seeds and sowing				
	Cost of 12 kg of seeds at Rs. 3	---	---	---	36.00
	Cost of sowing behind the country plough	2	---	3	32.00
III	Manure and manuring				
	Cost of 500 kg. of lime	---	---	---	150.00
	Cost of 20 kg N. Ammonium Sulphate and 40 kg. P. as Super	---	---	---	340.00
	Application of manures and fertilizers	---	2	4	26.00
IV	After cultivation				
	Weeding and bowing	---	---	25	100.00
	Plant protection	---	---	---	50.00
V	Harvest				
	Harvesting, threshing, drying etc.	---	---	35	140.00
	Total	12	2	67	974.00

Yield

	Rs.
Grams 600 kg. at the rate of 2/50/kg	--- 1,500.00
Net Profit	--- <u>526.00</u>

The seed rate for mixed crop of red gram is 6 to 7 kg per hectare.

APPENDIX IX
Cost of cultivation of rubber (per hectare) description of work

	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
Nursery			
1. Preparation of primary nursery river sand 1 cl.	---	---	10.00
2. Forming beds for germinating seeds (1sq. M/1000)	1	---	5.00
3. Cost of clonal seeds (1000) Rs. 100/1000	---	---	100.000
4. Sowing and watering	1	---	15.00
Secondary nursery			
1. 12 beds of size 10 x 1 x 2 M	5	---	25.00
2. Transplanting	2	---	10.00
3. Manuring F.Y.M (30 kg) Rock phosphate (3kg) 8 : 12:10 Mixture (42 kg.)	---	---	65.00
4. Transplanting fertilizers and applying dried leaves for mulching	6	---	30.00
5. Watering for 6 months	---	---	100.00
6. Plant protection	---	---	25.00
Total			385.00
Main-field 1st year			
1. Clearing the site, budding and budding	40	---	200.00
2. Liming, pegmarking and digging pits 400 2 ½ ' x 2 ½ ' x 2 ½ size spacing 5x5 meters	50	---	250.00
3. Compost at the rate of 12 kg pit 4800kg or 5 tons at the rate of Rs. 50/ton	---	---	250.00
4. Rock phosphate at the rate of 225 gram pit 100 kg. (8:12:12 mixture 200 kg.)	---	---	60.00 300.00
5. Transporting and application of manures and fertilizers	15	12	125.00
6. Stumping, seeding, thinning rocks, planting, shading	15	---	75.00
7. Cost of cover crop seeds Rs. 5/kg. (15kg)	---	---	75.00
8. Sowing the cover crop seeds and Misc. expenses	5	---	82.00
Total			1,800.00

	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
II year			
1. Cap filling and digging around the plant	26	---	130.00
2. 8:12:12 mixture 40 kg.	---	---	600.00
3. Transporting	---	---	20.00
4. Application in 2 split doses	10	---	50.00
5. Pruning, preparing bunds	10	---	50.00
6. Plant protection and Mise.	---	---	50.00
Total			900.00
III year			
1. Digging and weeding	25	---	125.00
2. Applying 8:12:12 mixture 450 kg.	---	---	675.00
3. Transporting and application	14	---	70.00
4. Plant protection	---	---	80.00
Total			950.00
IV year			
1. Digging and weeding	40	---	200.00
2. Cost of 8:12:12 mixture 550 kg	---	---	725.00
3. Transporting	5	---	25.00
4. Application in split doses	10	---	50.00
5. Plant protection	---	---	100.00
Total			1,100.00
V year			
1. Digging and weeding	40	---	200.00
2. 8:12:12 mixture (700 kg.)	---	---	1,029.00
3. Transporting and application	12	9	96.00
4. Plant protection	---	---	75.00
Total			1,400.00
VI year			
1. Digging and weeding	40	---	200.00
2. 8:12:12 mixture (800 kg.)	---	---	1,200.00
3. Application in 2 split doses	15	---	75.00
4. Plant protection	---	---	75.00
Total			1,550.00

	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
VII year			
1. Digging around plants, weeding	40	---	200.00
2. Cost of 8:10:12 mixture 800 kg.	---	---	1,200.00
3. Transporting	---	---	40.00
4. Application charges	15	---	75.00
5. Cost of shell spouts	---	---	20.00
6. Tapping 400 trees once in 3 days (100 days) at the rate of Rs. 3 per 100 trees.	---	---	1,200.00
7. Processing 60 yrs/kg. of processed rubber 400 kg.	---	---	265.00
Total			3000.00
VIII year			
1. Same as 7 th year	---	---	3,000.00
2. Additional expenditure for tapping 50 – tapping days	---	---	600.00
3. Additional expenditure for processing (300 kg)	---	---	200.00
Total			3,800.00
IX year			
1. Same as 8 th year	---	---	3,800.00
2. Additional expenditure for processing 200 kg	---	---	200.00
Total			4,000.00
X year			
1. Same as 9 th year	---	---	4,000.00
2. Additional expenditure for processing 100 kg	---	---	60.00
Total			4,060.00

APPENDIX X
Coffee (cost of cultivation) in hectares (1st year of planting)

	Pair @ Rs.10	Man @ Rs.5	Woman @ Rs.4	Amount Rs.
Preparatory cultivation				
Clearing the field	---	40	40	360.00
Digging pits	---	50	---	250.00
Planting shade trees	---	25	10	165.00
Manures and manuring				
Cost of 20 cart loads of organic manure	---	---	---	200.00`
Cost of 250 kg of fertilizer mixture	---	---	---	300.00
Application of fertilizer and manure	---	25	10	165.00
Seed and sowing				
Cost of seeds including lay out of nursery.	---	---	---	444.00
Cost of planting	---	10	10	90.00
After cultivation				
Weeding and housing	---	25	25	225.00
Forming shade to the plants and mulching	---	---	---	500.00
Total	---	165	95	2,700.00

Yield in first year – Nil

Coffee (cost of cultivation - 2nd year of planting)

	Man @ Rs.5	Woman @ Rs.4	Amount Rs.
1. Clearing weeds	---	50	200.00
2. Widening pits and hoeing and manuring, pruning etc.	25	10	165.00
3. Cost of manures 350 kg. of fertilizer mixture	---	---	435.00
4. Miscellaneous expenses	---	---	100.00
Total	25	60	900.00
Yield - Nil			

Coffee (cost of cultivation - 3rd year of planting)

	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
Same as of 2 nd year	---	---	900.00
Yield - Nil			

Coffee (cost of cultivation - 4th year)

	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
1. Clearing weeds	---	50	200.00
2. Widening pits, digging, manuring and pruning.	25	10	165.00
3. Cost of 500 kg. of fertilizer mixture	---	---	600.00
4. Regulating shade trees	15	---	75.00
5 Miscellaneous items	---	---	155.00
Total	40	60	1,200.00

Yield bearing @ Rs. 300 kg./hect.

Income – Rs.1,200/-

Profit - Nil

Coffee (cost of cultivation 5th year of planting)

	Man @ Rs. 5	Woman @ Rs. 4	Amount Rs.
The cost of cultivation is same as of 4 th year	---	---	1,200.00

Yield – kg. bearing @ Rs. 500 kg.

Income – Rs. 2,000.00

Net Profit – Rs. 800

After 5th year, yield will be regular and the cultivation expenses also regular as 5th year.

APPENDIX XI
Details of staff and their scale of pay

	Scale of pay	No. of posts	Pay etc Rs.	Total Rs.
1.	Deputy Director of Agriculture (Dy. Directors) 750 – 50 – 1050 – 50/2 - 1200	1	Pay 9,000 DA 1,080 HTA 600	10,680
2.	District Agricultural Officers 560-25-635-30-785-35-820-40-900-50-950-50/2-1100	4	Pay 26,880 DA 3,216 HTA 2,400	32,496
3.	Junior Agricultural Officers 435-15-510-20-650-20/2 - 660	9	Pay 46,980 DA 5,616 HTA 4,698	57,294
4.	Agricultural Demonstrators II 230-6-236-7-257-8-345-8/2-385	16	Pay 44,160 DA 6,104 HTA 8,640	58,904
5.	U.D. Clerks 275-11-330-13-460-13/2-525	16	Pay 16,500 DA 2,640 HTA 1,650	20,790
6.	L.D. Clerks 230-6-236-7-257-8-345-8/2-385	6	Pay 16,560 DA 2,664 HTA 1,656	20,880
7.	L.D. Typists - do -	5	Pay 13,800 DA 2,220 HTA 1,380	17,400
8.	Jeep Drivers 215-5-225-6-237-7-258-8-330-8/2-370	5	Pay 12,900 DA 2,160 HTA 1,290	16,350
9.	Lorry Driver - do -	1	Pay 2,580 DA 432 HTA 258	3,270
10.	Tractor Drivers - do -	4	Pay 10,320 DA 1,728 HTA 1,032	13,080
11.	Mechanic - do -	1	Pay 2,580 DA 432 HTA 258	3,270
12.	Peons 196-3-229-4-245-4/2-265	6	Pay 14,112 DA 2,232 HTA 1,728	18,072
13.	Watchman - do -	1	Pay 2,352 DA 372 HTA 288	3,012
Grand Total				2,75,496

(Rounded to Rs. 2,75,500)

ANNEXURES III E TO J
**Project Report of the Proposed Collective / Co-operative Farm in Vested Forest
Lands in Attappady**

Introduction

The scheme is intended to rehabilitate 1500 families of Tribals, namely Irulas, Mudukas and Kurumbas of Attappady Block by giving an area of 2 Hectares net for each family for cultivating on a collective basis. Attappady Block is situated in eastern side of Mannarghat Block. The area of the Attappady Block is 765 sq. km with 116 hamlets of Tribals. Formerly these Tribals were cultivating in the forest lands by shift cultivation method. Due to increase of Tribal population and also by entrance of settlers from outside and strict action by the Forest Department against the shift cultivation, now the Tribals are accustomed to settled cultivation. Even though they have their own lands, due to lack of scientific knowledge of cultivation and lack of finance, they are not in a position to cultivate the land in a profitable way. Further these Tribals are cheated by the settlers and most of the lands of Tribals are now with the settlers.

The elevation of the Attappady range from 1200' to 3000' above M.S.L. Bhavani and Siruvani are two main rivers which drain the valley. Nilgiris are the northern boundary of Attappady while Muthikulam, Anakatty and Mannarghat lie to its south-eastern boundaries. The rainfall varies from 40" on the Coimbatore side to 200" in the dense evergreen forests in the western and southern parts of the valley. Anyhow the average rainfall is 67".

The total population of Attappady Block as per 1971 Census is 39,183 out of which 15,800 are Tribals. Out of this Adivasis, Irulas are the prominent, numbering 12,614 next comes Mudukas 2,370, Kurumbas 816.

Land Utilisation

Out of the total area of 76,500 hectares, 60,600 hectares are covered by forests. The barren uncultivable land will be about 2,500 hectares. The land put to non-agricultural purposes is 500 hectares. The net cultivable areas comes to 12,900 hectares. It is seen that only 150 hectares of lands are sown more than once. An area of 7,675 hectares are under single crops and 925 hectares are under cultivable waste current fallows.

Organisation of collective/ co-operative farm in the vergin forest area

As earlier stated, out of 69,600 hectares of forest land 17,176 hectares is nationalised private forests. An assessment of nationalised private forest lands by Forest Department shows that an area of 3,800 Hectares are fit for assignment. Among these 3,800 hectares suitable land for cultivation shall be made use of mainly in the rehabilitation of Tribal population of Attappady Block numbering 1500 families.

A thorough investigation has been made by the Joint Director of Agriculture, District Agriculture Officer, Assistant Director (Sugarcane Development) along the technical officers of other Department like Public Works Department (Buildings and Roads), Public Works Department (Minor Irrigation), Soil Conservation, Co-operation, Veterinary, Dairy Development, Forest, Block officials of Attappady Block and Assistant Development Commissioner, Palghat and the following sites were selected for rehabilitating Tribal families.

An abstract of locality, area and number of families to be rehabilitated is given below:

Abstract of area selected and number of families to be rehabilitated

	Name of locality	Total area (in hect)	Area for roads and buildings	Area for settling the tribals	No. of families to be settled	Area of homestead plot	Area of joint cultivation
	1	2	3	4	5	6	7
1.	Karuvara	300	30	270	135	27	243
2.	Chindakki	140	20	120	60	12	108
3.	Pothuppadi	440	40	400	200	40	360
4.	Kottamala and Chundakulam	160	20	140	50	10	130
5.	Varadimala	440	40	400	200	40	360
6.	Inchikunnu	440	40	400	200	40	360
	Total	1,920	190	1,730	845	169	1,561

1. Kuruvvara (Annexure III E)

The site is situated on road side of Mukali-Silent Valley Road about 8 km away from Mukkali. A tributary of Bhavani is flowing through this area which is having perennial supply of water. This area lies on the either side of the above stream for a length of 6 km. The rainfall is available in both South-west and North-east

monsoon with an annual rainfall of 120". The total area available is 300 hectares. Out of which 30 hectares are earmarked for roads, office buildings, etc. So the balance area of 270 hectares can be allotted to 135 families at 2 Hectares per family including the homestead plot of 0.2 hectare. So a family will get a homestead plot of 0.2 hectare for their home and independent cultivation and 1.8 hectares for collective cultivation. In the Homestead plot 0.2 hectare, 0.05 hectare may be for his home. 0.05 hectare for fruit plants and 0.1 hectare for vegetable cultivation.

Out of the total area of 270 hectares, 27 hectares are for Homestead plots of 135 families and 243 hectares are available for joint cultivation. This 243 hectares can be put under different crops as follows. The cost of cultivation of each crop per acre are given in the appendix.

Details of Crops

1. 43 hectares - Paddy followed by jowar
 2. 100 hectares - Jowar followed by pulses
 3. 50 hectares - Ragi followed by jowar
 4. 50 hectares - Maize with mixed crop of red gram
- Total net area - 243 hectares

Gross area of crops of joint cultivation and its costs of cultivation

Name of crop	Gross area Hect.	Cost of cultivation Rs.	Yield Tons	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Paddy	43	58,840	60	94,000	35,160
2. Jowar	190	1,91,520	152	3,04,000	1,12,480
3. Ragi	50	61,650	40	80,000	18,350
4. Maize	50	62,000	50	1,05,500	43,000
5. Pulses	100	79,600	50	1,25,010	45,400
6. Red Gram	.	5,000	12.5	25,000	20,000
Total	433	4,58,610	364.5	7,33,000	2,74,390

(The cost of cultivation of red gram as a mixed cropping is the cost of seed and harvesting charge).

In addition to the above, cultivation expenses of vegetables and fruit plants in homestead plot are to be met for the first year of settling by Department.

1.	The area under vegetable cultivation in 137 Homestead plots @ 0.1 hect.	13.7 hect.
2.	Area of fruit plants @ 0.05 hect. per home	6.75 hect.
3.	Cost of cultivation of 13.7 hect. @ Rs.1,750	Rs.23,600
4.	Cost of fruit plants and planting charges in 6.65 hectares @ fruit plants worth Rs.30 per family	30 x 135 = Rs.4,050
	Therefore gross cultivation charges in Karuvara	Rs.4,86,260.00
	Gross income excluding the income of Homestead plots	Rs.7,33,300.00

The details of cultivation and income for 10 years in Karuvara

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	4,86,260	7,33,000	2,46,740
2 nd year	4,58,610	7,33,000	2,74,390
3 rd year	4,58,610	7,33,000	2,74,390
4 th year	4,58,610	7,33,000	2,74,390
5 th year	4,58,610	7,33,000	2,74,390
6 th year	4,58,610	7,33,000	2,74,390
7 th year	4,58,610	7,33,000	2,74,390
8 th year	4,58,610	7,33,000	2,74,390
9 th year	4,58,610	7,33,000	2,74,390
10 th year	4,58,610	7,33,000	2,74,390

2. Chindakki (Annexure III F)

This site is situated 8 km away from Mukkali junction on the side of Bhavani River. The elevation is 1500' above M.S.L. The rainfall is about 100". The total area available is 140 hectares out of which 20 hectares are earmarked for roads and buildings. The balance area is 120 hectares in which 60 family can be settled. The area for homestead plot will be 12 hectares and area for joint cultivation will be 108 hectares. The soil is very fertile of black humus. A tributary of Bhavani is running through the site which is supposed to be of perennial nature. The slope in 60 hectares lying very near to the stream is very gentle and by constructing a Vier, 60 hectares can be cultivated with flow irrigation. Now paddy, millet, grains are being cultivated. If the Vier is constructed, sugar-cane and paddy can be cultivated in this 60 hectares.

The following cropping pattern is suggested for the above 108 hectares of joint cultivation.

1. 40 hectares .. Sugarcane
2. 20 hectares .. Paddy followed by paddy (Gross 40 hecets.)
3. 20 hectares .. Ragi followed by Jowar
4. 28 hectarers .. Jowar mixed Red gram

Cost of cultivation of each crop is given in the appendix

Gross area of crops of joint cultivation and its cost of cultivation

Name of crop	Gross area (hects.)	Cost of cultivation Rs.	Yield Tons	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Sugar cane	40	1,66,800	3,000	2,70,000	1,03,200
2. Paddy	40	80,000	80	1,24,000	44,000
3. Ragi	20	24,660	16	32,000	7,340
4. Jowar	48	48,384	38	76,800	28,416
5. Red gram mixed crop		2,800	7	17,500	14,700
Total	148	3,22,644	3,141	5,20,300	1,97,516

(The cost of cultivation of Red gram as a mixed crop is the cost of seed and harvesting charges only. The yield @ 250 kg. per hect.)

In addition to the above cultivation expenses of vegetables and cost of fruit plants in the homestead plots are to be met by Department for the first year of settling.

1.	area under vegetable in homestead plots @ 0.1 hect.	6 hectares.
2.	Area under fruit plants @ 0.05 hect.	3 hectares.
3.	Cost of cultivation of 6 hectares. vegetables @ Rs.1,750	Rs.10,500
4.	Cost of fruit plants worth Rs.30 per family	Rs.1,800
	Therefore gross cultivation charges in first year	Rs.3,35,000
	Gross income excluding income from Homestead plots	Rs.5,20,300

Details of cost of cultivation and income for 10 years in Chindaki

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	3,35,000	5,20,300	1,85,300
2 nd year	3,22,644	5,20,300	1,97,656
3 rd year	3,22,644	5,20,300	1,97,656
4 th year	3,22,644	5,20,300	1,97,656
5 th year	3,22,644	5,20,300	1,97,656
6 th year	3,22,644	5,20,300	1,97,656
7 th year	3,22,644	5,20,300	1,97,656
8 th year	3,22,644	5,20,300	1,97,656
9 th year	3,22,644	5,20,300	1,97,656
10 th year	3,22,644	5,20,300	1,97,656

3. Pothupadi (Annexure III G)

The site is situated about 8 km from Goolikadavu starting from Kallekkad extending upto Pothupadi. The elevation is about 2000' to 2,500' above M.S.L. The soil is very fertile and full of humus. The rainfall is about 100" covering both South-West and North-East monsoons. The site is situated on the upper portion of Attappady Valley Project Catchment area. Power supply can be given from Agali directly (7 km) or from the Dam site which is 4 km. from the area. From the Goolikadavu to the Dam site, Public Works Department is constructing a road and from there, there is a kutcha estate road 6 km in length which is to be maintained properly.

The total area available is 440 hectares. Out of which 40 hectares may be set apart for roads, buildings, etc. 200 families can be settled in the area of 400 hectares in which 40 hectares may be earmarked for homestead plots and 360 hectares for joint cultivation. This 360 hectares are having thick forest with shade trees which are suited for Cardamom cultivation. As the Cardamom cultivation will not affect existing forest wealth, it is suggested to put the entire area under Cardamom. Out of 360 hectares 10 hectares which is very near to the tributary of Siruvani which is of perennial nature and being plain can be set apart for Cardamom nursery. The remaining 350 hectares can be planted with main crop of Cardamom within 3 years.

i.e. 1st year .. 100 hectares
 2nd year .. 100 hectares
 3rd year .. 150 hectares

The cost of cultivation and economics of 350 hectares of Cardamom cultivation for 10 years is given below:

Cost of cultivation of Cardamom

Particulars	Men at Rs.5	Women at Rs.4	Amount Rs.
1	2	3	4
First year			
1. Clearing the undergrowth	50	10	290.00
2. Cutting pegs of 75 cm (1,600 pegs)	5	..	25.00
3. Alignment and pegging	10	..	50.00
4. Preparation of footpaths	30	..	150.00
5. Digging 1,600 pits of 75 cm x 75 cm x 30 cm	80	..	400.00
6. Filling the pits with forest soil	..	64	256.00

Particulars	Men at Rs.5	Women at Rs.4	Amount Rs.
1	2	3	4
7. Uprooting the seedlings from Nursery and transporting	2	8	42.00
8. Cost of seedlings including nursery charges	..	..	500.00
9. Planting, seedling, staking	7	10	75.00
10. Mulching with dried leaves	..	10	40.00
11. Weeding twice at 30 women / weeding	..	60	240.00
Total	184	162	2,068.00
Income	-	-	Nil
Second Year			
1. Weeding first round in May-June	..	35	140.00
2. Second weeding in August – September	..	30	120.00
3. Forming basin around the plant	75	..	375.00
4. Maintenance of footpaths, roads, etc.	20	..	100.00
5. Spraying	4	..	20.00
6. Cost of chemicals	..	..	25.00
7. Shade regulation	5	..	25.00
8. Maintenance of fire belt	15	..	75.00
9. Filling up gap about 160 seedlings after taking basins, transport of seedlings, etc.	3	5	35.00
10. Cost of 8 tonnes of organic manure @ 5 kg per plant including application charges	..	..	400.00
Total cost of cultivation	112	70	1,435.00
Third year:-			
1. Thrashing in May-June and weeding	..	60	240.00
2. Second weeding in August –September	..	30	120.00
3. Clearing footpaths, roads	20	..	100.00
4. Shade regulation	5	..	75.00
5. Spraying	15	..	75.00
6. Cost of materials	..	..	100.00
7. Harvesting 6 rounds	..	25	100.00
8. Curing charges	..	..	25.00
9. Providing fire belt	15	..	75.00
10. Cost of 8 tonnes of organic manure including application charges	..	..	400.00
Total cost of cultivation	55	115	1,310.00
Income of 40 kg of dry pods @ Rs.50			2,000.00
Fourth year			
1. Thrashing, weeding in June	..	65	260.00
2. Second weeding in August-September	..	30	120.00
3. Cleaning footpaths	20	..	100.00
4. Shade regulation	5	..	75.00
5. Plant protection	15	..	75.00

Particulars	Men at Rs.5	Women at Rs.4	Amount Rs.
1	2	3	4
6. Cost of materials	..	..	125.00
7. Cost of manure and application charges (40:80:80)	..	..	900.00
8. Harvesting green Cardamom – 6 rounds	..	60	240.00
9. Curing	..	..	100.00
10. Filling up gaps	5	..	25.00
11. Removal of Katte affective plants	5	..	25.00
12. Fire belt care	15	..	75.00
	65	155	2,120.00
Income of 60 kg of dry pods @ Rs.50	..	..	3,000.00
Net profit	..	..	880.00
Fifth year:			
Cost of cultivation (same as 4 th year)	..	..	2,160.00
Income of 70 kg of dry pods @ Rs.50	..	..	3,500.00
Net profit	..	..	1,340.00

6th year to 10th year the expenditure and income are the same as fifth year.

In addition to the above, the cultivation expenses of vegetables and cost of fruit plants in the homestead plots are to be met by department for the first year of settling.

1.	Area under vegetables in homestead plots of 200 families @ 0.1 hectare	20 hectares
		Rs.
2.	Cost of cultivation of 20 hectares @ Rs.750	35,000
3.	Cost of fruit plants worth Rs.30 per family	6,000
Cost of cultivation for the first year:		
1.	The cost of cultivation of cardamom in 100 hectares in first year @Rs.2,068 per hectare	2,06,800
2.	Cost of cultivation of vegetables and fruit plants for homestead plots	41,000.00
	Total expenditure for first year	2,47,800.00
	Income	Nil
Cost of cultivation of 2nd year:		
1.	cost of cultivation of 100 hectares of planted in the previous year @ Rs.1315	1,31,500.00
2.	Cost of cultivation of 100 hectares of fresh planting @ Rs.2,068	2,06,800.00
	Total cost of cultivation for 2 nd year	3,38,300.00
	Income	Nil
Cost of cultivation of 3rd year:		
1.	Cost of cultivation of 200 hectares planted in previous years @ Rs.1,315	2,63,000.00
2.	Cost of cultivation of fresh planting of 150 hectares	3,10,200.00

	@ Rs.2,068	
	Total cost of cultivation	5,73,200.00
3.	Total income for 3 rd year for 100 hectares of 3 rd year crop 40 kg. of dry pod per hectare	2,00,000.00
Cost of cultivation for 4th year:		
1.	Cost of cultivation of 350 hectares @ Rs.1,315 per hectare	4,60,250.00
2.	Income:	
	(a) Income for 100 hectares of 1 st year planting @ 60 kg of dry pods	3,00,000.00
	(b) Income from 100 hectares of 2 nd year planting @ 40 kg per hectare	2,00,000.00
	Total Income	5,00,000.00
Cost of cultivation for 5th year:		
1.	Cost of cultivation of 350 hectares @ Rs.1,315 per hectare	4,60,250.00
2.	Income:	
	(a) Income from 1 st year planting of 100 hectares @ 70 kg per hectare	3,50,000.00
	(b) Income from 2 nd year planting of 100 hectares @ 60 kg per hectare	3,00,000.00
	(c) Income from 3 rd year planting of 150 hectares @ 40 kg.	3,00,000.00
	Total Income	9,50,000.00
Cost of cultivation for 6th year:		
1.	Cost of cultivation of 350 hectares @ Rs.1,315 per hectare	4,60,250.00
2.	Income:	
	(a) Income from 200 hectares of 1 st & 2 nd year planting @ 70 kg per hectare	7,00,000.00
	(b) Income from 150 hectares of 3 rd year planting @ 60 kg per hectare	5,25,000.00
	Total Income	12,25,000.00
Cost of cultivation for 7th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00
Cost of cultivation for 8th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00
Cost of cultivation for 9th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00
Cost of cultivation for 10th year:		
1.	Cost of cultivation of 350 hectares	4,60,250.00
2.	Income from 350 hectares @ 70 kg	12,25,000.00

Details of cost of cultivation and income for 10 years in Pothupadi in 350 hectares

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	2,47,800.00	Nil	Nil
2 nd year	3,38,300.00	Nil	Nil
3 rd year	5,73,200.00	2,00,000.00	Nil
4 th year	4,60,250.00	5,00,000.00	39,750.00
5 th year	4,60,250.00	9,50,000.00	4,89,750.00
6 th year	4,60,250.00	12,25,000.00	7,64,750.00
7 th year	4,60,250.00	12,25,000.00	7,64,750.00
8 th year	4,60,250.00	12,25,000.00	7,64,750.00
9 th year	4,60,250.00	12,25,000.00	7,64,750.00
10 th year	4,60,250.00	12,25,000.00	7,64,750.00

4. Kottamala and Chundakulam (Annexure III H)

This area is situated on the eastern side of Siruvani River in the hamlets of Kottamala and Chundakulam which is 4 km from Goolikadavu. There is a kutch road to this area and only a cause-way at Moochikkadam is to be constructed. The electricity can be tapped either from Agali or Attappady Valley Project dam site. The rainfall is 60".

The total area available is 160 hectares. Out of which 20 hectares may be set apart for roads and buildings. Balance area is 140 hectares. Since the area is suitable only for dry crops, and as the out-turn is very much limited each family can be given @ 7 acres (2.8 hectares) including homestead plot. 50 families can be settled here in this 140 hectares. The area for homestead plot is 10 hectares and for joint cultivation is 130 hectares.

The crops that can be grown are given below:

1. 70 hectares – Groundnut followed by jowar.
2. 60 hectares – Maize followed by horsegram

The rotation may change according to the availability of rain and demand of tribals. The cost of cultivation of each crop is given in the appendix.

Gross area of crops of joint cultivation and its cost of cultivation

Name of crop	Gross area (hects.)	Cost of cultivation Rs.	Yield Tons	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Ground nut	70	1,05,000	70	1,40,000	35,000
2. Jowar	70	70,000	56	1,12,000	42,000
3. Maize	60	74,460	60	1,20,000	45,600
4. Horsegram (Pulses)	60	48,000	30	75,000	27,000
Total	260	2,97,400	216	4,47,000	1,49,600

	Rs.
Cultivation expenses for 1 st year for vegetables homestead plot in 5 hect. vegetable and fruit plants at Rs.30 per family	9,250.00
Gross cost of cultivation for 1 st year	3,06,650.00
Total income	4,47,000.00

Details of cost of cultivation and income for 10 years in 130 hectares in Kottamala and Chundakulam

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	3,06,650	4,47,000	1,40,350
2 nd year	2,97,400	4,47,000	1,49,600
3 rd year	2,97,400	4,47,000	1,49,600
4 th year	2,97,400	4,47,000	1,49,600
5 th year	2,97,400	4,47,000	1,49,600
6 th year	2,97,400	4,47,000	1,49,600
7 th year	2,97,400	4,47,000	1,49,600
8 th year	2,97,400	4,47,000	1,49,600
9 th year	2,97,400	4,47,000	1,49,600
10 th year	2,97,400	4,47,000	1,49,600

5. Varadi Mala (Annexure III I)

This area is in Sholayar Village which is situated 6 km south-west of Sholayar. The elevation 3,000' to 4,000'. The rainfall is 60". An area of about 440 hectares will

be available near the Siruvani group of estates. There is a kutch estate road of 8 km leading from Sholayar. This is to be realigned and reformed. Water facilities are available from Varagampadi stream. The electricity can be tapped from Kulukkur which is 12 km from the site. Part of the area is thick forest with fertile soil. Out of this 440 hectares, 40 hectares may be set apart for roads and buildings and 40 hectares for homestead. and 360 hectares for joint cultivation. 200 families can be settled here. Out of this 360 hectares, 220 hectares are situated in thick forest area, cardamom can be cultivated i.e. 210 hectares main crop and 10 hectares of nursery. The remaining 140 hectares can be put under coffee. The cropping pattern and its economics are appended.

1. 210 hectares – Cardamom (planted in first year)
2. 140 hectares – Coffee (2nd year)

The cost of cultivation of cardamom is already given and the cost of cultivation of coffee is given in the appendix.

Cost of cultivation and income for 10 years

		<i>Rs.</i>
First year:		
a.	Cost of cultivation of 210 hectares of cardamom @ Rs.2,068 per hect.	4,34,280
b.	Cost of cultivation of 20 hect. of vegetables in homestead plot and cost of fruit plants for 200 families	41,000
	Total	4,75,280
	Income	Nil
2nd year:		
a.	Cost of cultivation of 210 hectares of cardamom at Rs.1,315 per hect.	2,76,150
b.	Cost of cultivation of 140 hectares of coffee @ Rs.2,700 per hect.	3,78,000
	Total	6,54,150
	Income	Nil
3rd year:		
a.	Cost of cultivations 210 hectares of cardamom at Rs.1,315 per hect.	2,76,150
b.	Cost of cultivation of 140 hectares of coffee (2 nd year) at Rs.900 per hect.	1,26,000
	Total	4,02,150
c.	Income from cardamom @ 40 kg per hect.	4,20,000
4th year:		
a.	Cost of cultivation of 210 hectares of cardamom	2,76,150
b.	Cost of cultivation of 140 hectares of coffee (3 rd year) at Rs.900	1,26,000

	Total cost of cultivation	4,02,150
c.	Income from 210 hect. of cardamom @ 60 kg per hect.	6,30,000
5th year:		
a.	Cost of cultivation of 210 hect. of cardamom @ Rs.1,315	2,76,150
b.	Cost of cultivation of 140 hectares of coffee (4 th year) @ Rs.1200	1,68,000
	Total cost of cultivation	4,44,150
c.	Income:	
	(a) Income from cardamom @ 70 kg per hectare	7,35,000
	(b) Income from 140 hectare of coffee @ 300 kg per hectare	1,68,000
	Total Income	9,03,000
6th year:		
a.	Cost of cultivation of 210 hectares of cardamom	2,76,150
b.	Cost of cultivation of 140 hectares of coffee @ Rs.1,200	1,68,000
	Total cost of cultivation	4,44,150
c.	Income:	
	(a) Income from 210 hect. of cardamom @ 70 kg	7,35,000
	(b) Income from 140 hectare of coffee @ 500 kg per hectare	2,80,000
	Total Income	10,15,000

The expenditure and income from 7th year to 10th year is the same as in the case of 6th year.

**Details of cost of cultivation and income for 10 years
in 400 hect. area in Varadimala**

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	4,75,280	Nil	Nil
2 nd year	6,54,150	Nil	Nil
3 rd year	4,02,150	4,20,000	17,850
4 th year	4,02,150	6,30,000	27,850
5 th year	4,44,150	9,03,000	4,58,850
6 th year	4,44,150	10,15,000	5,70,850
7 th year	4,44,150	10,15,000	5,70,850
8 th year	4,44,150	10,15,000	5,70,850
9 th year	4,44,150	10,15,000	5,70,850
10 th year	4,44,150	10,15,000	5,70,850

6. Inchikunnu (Annexure III J)

This area is situated in Pottassery Village in Mannarghat Taluk in the western side of Attappady Hills. This site is about 11 km from Kanjirapuzha dam site. The area available is about 440 hectares which is almost uncleared. 40 hectares may be set

apart for roads and buildings. In the remaining 400 hectares available for cultivation, 200 families can be settled. In the 400 hectares, 40 hectares may be earmarked for homestead plots and 360 hectares for joint cultivation.

In the upper portion of this 360 hectares, 110 hectares can be put under cardamom, where there is thick forest. In the remaining 250 hectares, 150 hectares can be put under rubber and 100 hectares under coffee.

During the first year 100 hectares can be put under coffee. In the 2nd year, 150 hectares of rubber may be planted. In the third year the remaining area of 110 hectares can be put under cardamom.

The cost of cultivation of cardamom, coffee and rubber is given in the appendix.

Cultivation expenses and income in year-wise for 10 year is given below.

		Rs.
First year:		
1.	Cost of cultivation of 100 hectares of coffee (1 st year) @ 2,700 per hectare	2,70,000
2.	Cost of cultivation of 20 hectare of vegetables in homestead and cost of fruit plants @ Rs.30 per family	41,000
	Total	3,11,000
3.	Income	Nil
2nd year:		
1.	Cost of cultivation of 100 hectares of coffee (2 nd year) @ 900 per hectare	90,000
2.	Cost of cultivation of 150 hectares of rubber @ Rs.1800 per hectare	2,70,000
	Total	3,60,000
	Income	Nil
3rd year:		
1.	Cost of cultivation of coffee in 100 hect. (3 rd year) @ 900 per hectare	90,000
2.	Cost of cultivation of 150 hect. of rubber (2 nd year) @ Rs.900 per hectare	1,35,000
3.	Cost of cultivation of 110 hect. of cardamom (first year) @ Rs.2,008 per hectare	2,27,480
	Total	4,52,480
4.	Income	Nil
4th year:		
1.	Cost of cultivation of 100 hect. of coffee (4 th year) @ 1,200 per hectare	1,20,000

2.	Cost of cultivation of 150 hect. of rubber (3 rd year) @ Rs.950 per hectare	1,42,500
3.	Cost of cultivation of 110 hect. of cardamom (2 nd year) @ Rs.1,315 per hectare	1,44,650
	Total	4,07,150
4.	Income from 100 hect. of coffee (4 th year) @ 300 kg per hectare	1,20,000
5th year:		
1.	Cost of cultivation of 100 hect. of coffee (5 th year) @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (4 th year) @ Rs.1,100 per hectare	1,65,000
3.	Cost of cultivation of 110 hect. of cardamom (3 rd year) @ Rs.1,315 per hectare	1,44,680
	Total	4,29,650
4.	Income from 100 hect. of coffee (5 th year) @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of cardamom @ 40 kg per hectare (3 rd year)	2,20,000
	Total income	4,20,000
6th year:		
1.	Cost of cultivation of 100 hect. of coffee (6 th year) @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (5 th year) @ Rs.1,400 per hectare	2,10,000
3.	Cost of cultivation of 110 hect. of cardamom (4 th year) @ Rs.1,315 per hectare	1,44,650
	Total expenditure	4,74,650
4.	Income for 100 hect. of coffee (6 th year) @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of cardamom (4 th year)@ 60 kg per hectare	3,30,000
	Total income	5,30,000
7th year:		
1.	Cost of cultivation of 100 hect. of coffee (7 th year) @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (6 th year) @ Rs.1,550 per hectare	2,32,500
3.	Cost of cultivation of 110 hect. of cardamom (5 th year) @ Rs.1,315 per hectare	1,44,650
	Total	4,97,150
4.	Income from 100 hect. of coffee @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of cardamom (5 th year)@ 70 kg per hectare	3,85,000
	Total income	5,85,000
8th year:		
1.	Cost of cultivation of 100 hect. of coffee @ 1,200 per hectare	1,20,000

2.	Cost of cultivation of 150 hect. of rubber (7 th year) @ Rs.3,000 per hectare	4,50,000
3.	Cost of cultivation of 110 hect. of cardamom @ Rs.1,315 per hectare	1,44,650
	Total	7,14,650
4.	Income from 100 hect. of coffee @ 500 kg per hectare	2,00,000
5.	Income from 110 hect. of rubber (7 th year)@ 400 kg per hectare	3,00,000
6.	Income from 10 hect. of cardamom @ 70 kg. per hectare	3,85,000
	Total income	8,85,000
9th year:		
1.	Cost of cultivation of 100 hect. of coffee @ Rs.1,200 per hect.	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (8 th year) @ Rs.3,300 per hectare	5,70,000
3.	Cost of cultivation of 110 hect. of cardamom @ Rs.1,315 per hectare	1,44,650
	Total	8,34,650
4.	Income from 100 hect. of coffee @ 500 kg per hectare	2,00,000
5.	Income from 150 hect. of rubber (8 th year)@ 700 kg per hectare	5,25,000
6.	Income from 110 hect. of cardamom @ 70 kg. per hectare	3,85,000
	Total income	11,10,000
10th year:		
1.	Cost of cultivation of 100 hect.of coffee @ 1,200 per hectare	1,20,000
2.	Cost of cultivation of 150 hect. of rubber (9 th year) @ Rs.4,000 per hectare	6,00,000
3.	Cost of cultivation of 110 hect. of cardamom @ Rs.1,315 per hectare	1,44,650
	Total	8,64,650
4.	Income from 100 hect. of coffee @ 500 kg per hectare	20,00,000
5.	Income from 150 hect. of rubber (9 th year)@ 900 kg per hectare	2,75,000
6.	Income from 110 hect. of cardamom @ 70 kg. per hectare	3,85,000
	Total income	12,60,000

**Details of cost of cultivation and income for 10 years
in Inchikunnu**

Year	Cost of cultivation Rs.	Income Rs.	Profit Rs.
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 st year	3,11,000	Nil	Nil
2 nd year	3,60,000	Nil	Nil
3 rd year	4,52,480	Nil	Nil
4 th year	4,07,150	1,20,000	Nil
5 th year	4,29,650	4,20,000	Nil
6 th year	4,74,650	5,30,000	55,350
7 th year	4,97,150	5,85,000	87,850
8 th year	7,14,650	8,85,000	1,70,350
9 th year	8,34,650	11,10,000	2,75,350
10 th year	8,64,650	12,60,000	3,95,350

The details of Capital Expenditure is given below:-

		<i>No.</i>	<i>Amount Rs.</i>
1.	Office of the Deputy Director	1	50,000
2.	Office of the District Agricultural Officer	4	1,60,000
3.	Godowns one at Agali and 4 at each District Agricultural Office	5	1,50,000
4.	Garage for tractor, jeep & lorry	10	1,00,000
5.	Office equipment, furniture, etc.	..	50,000
6.	Residential quarters for the agricultural staff	50	10,00,000
7.	Cost of one lorry, 4 tractors with trailers and 5 jeeps	10	5,00,000
8.	Farm implements for Tribals	..	50,000
	Total		20,60,000
The above expenditure is to be met in the first two years.			
	1 st year		12,60,000
	2 nd year		8,00,000

The staff pattern for implementing the agricultural programme for the proposed collective farm is given below.

1. Deputy Director of Agriculture .. 1 post

He will be in overall charge of the scheme with head quarters at Agali. The staff for his office is as follows.

- (a) Technical Assistant .. 1
- (b) U.D.Clerk .. 1
- (c) L.D.Clerks .. 2
- (d) L.D.Typist .. 1
- (e) Peons .. 2
- (f) Jeep Driver .. 1
- (g) Watchman .. 1
- (h) Lorry Driver .. 1
- (i) Mechanic .. 1

2. For effective supervision and administration, the whole area may be divided into 4 units each unit being under the control of one District Agricultural Officer.

The 4 units are as follows:-

- (a) Chindaki and Karuvara 390 Hectares
- (b) Pothupadi, Chundakulam and Kottamala 500 "
- (c) Varadimala 400 "
- (d) Inchikunnu 400 "

In the Office of the District Agricultural officer, the staff pattern will be as follows :-

- (a) District Agricultural officer 1
- (b) U.D. Clerk 1
- (c) L.D. Clerk 1
- (d) L.D. Typist 1
- (e) Peon 1
- (f) Jeep Driver 1
- (g) Tractor Driver 1

For effective technical supervision of the programme each District Agricultural Officer will be assisted by 2 Junior Agricultural Officers and 4 Demonstrators (Grade II) for field work.

Total Staff Pattern

		Deputy Director's office	District Agricultural Office	Total
1.	Deputy Director of Agriculture	1	--	1
2.	District Agricultural Officer	---	4	4
3.	Junior Agricultural Officers	1	8	9
4.	U.D. Clerks	1	4	5
5.	L.D. Clerks	2	4	6
6.	L.D. Typists	1	4	5
7.	Peon	2	4	6

8	Jeep Driver	1	4	5
9	Lorry Driver	1	--	1
10	Tractor Driver	--	4	4
11	Watchman	1	--	1
12	Agricultural Demonstrator (Grade II)	--	16	16

Note : The details of staff and scale of pay is given in Appendix XI.

Details of Establishment and Contingencies for 10 years

1st year.

(a)	Pay and allowances of the staff	2,75,000
(b)	Traveling Allowances	75,000
(c)	Contingencies including cost of petrol diesel etc.	<u>1,00,000</u>
	Total	<u>4,50,000</u>

2nd Year :

(a)	Pay and allowances	2,76,200
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,51,000</u>

3rd Year :

(a)	Pay and allowances	2,76,900
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,51,900</u>

4th Year :

(a)	Pay and allowances	2,77,600
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,52,600</u>

5th Year :

(a)	Pay and allowances	2,78,300
(b)	Traveling Allowances	75,000
(c)	Contingencies	<u>1,00,000</u>
	Total	<u>4,53,300</u>

6th Year :

(a)	Pay and allowances	2,79,000
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,54,000</u>

7th Year :

(a)	Pay and allowances	2,79,700
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,54,700</u>

8th Year :

(a)	Pay and allowances	2,80,500
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,55,500</u>

9th Year :

(a)	Pay and allowances	2,81,300
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,56,300</u>

10th Year :

(a)	Pay and allowances	2,82,100
(b)	Contingencies	1,00,000
(c)	Traveling Allowances	<u>75,000</u>
	Total	<u>4,57,100</u>

**Abstract of cost of cultivation and other expenditures and receipts for 10 years
(Rs. in '000)**

Year	Cultivation expenses	Capital expenses	Establishment charges and contingencies	Total expenditure	Receipts from farm produce
1 st	2,222	1,260	450	3,932	1,700
2 nd	2,431	800	451	3,682	1,700
3 rd	2,506	800	452	2,958	2,320
4 th	2,348	800	453	2,801	2,950
5 th	2,413	800	453	2,866	3,973
6 th	2,458	800	454	2,912	4,470
7 th	2,480	800	455	2,935	4,425
8 th	2,698	800	456	3,154	4,825
9 th	2,818	800	456	3,274	4,050
10 th	2,448	800	457	2,905	5,200

ANNEXURE III - K

Scheme for the Development of Tribal Families in Valad Area of Tavinjal Panchayat, North Wynad.

1. Introduction

Valad, an undeveloped area of Tavinjal Village located about 15 km away from Manantoddy town is a tribal pocket of Kurichia families. 3 Tribal families of Kurichias namely Edathana, Edamana and Pallot live there holding in possession 40-50 hectares of land. These Tribal families are sub-divided into several sub-families and the total number of members come to about 450.

The land now in the possession of the Tribal families is not put to the best use. The Kurichias follow the primitive and traditional method of cultivation. Ragi is cultivated during rainy season, adopting 'Punam' method of cultivation. They have not taken up cultivation of high yielding varieties of paddy, but use only the local strains. Paddy is not taken as punja crop due to sentimental views and beliefs.

The land consisting mainly hillocks is of poor soil fertility due to heavy soil erosion. The soil is of laterite origin. The yield obtained is poor. The kurichia families are also exploited by other well-to-do communities. It is learnt that about 400 hectares of Vested Forest lands are available in Valad area for assignment to these Tribal communities.

A detailed survey of the 400.00 hectares of land available has not yet been made and the scheme for the development programme of this area will be prepared on taking up soil survey.

II Objectives

1. The scheme envisages the development of the area by drawing up a suitable cropping pattern and maximising the agricultural production and thereby uplift the economically backward Tribal communities. The agricultural production can be increased by cultivating high yielding varieties of crops, soil conservation works, timely and adequate supply of inputs and credit for procuring the same with technical know-how for better farming.

2. It aims at the participation of 100 per cent Kurichia family members in the programme. Joint co-operative farming can be organised, registered and all the Kurichias enrolled as members. Collective ensuring of inputs, conducting farm operations together, pooling the farm produce and common marketing will ensure better returns and thereby improve the lot of the Tribal families.

III. Programme of work

The main programme of work aims at the following:-

- (a) Soil conservation – For preventing the soil erosion on hill slopes, soil conservation is a must for improving the soil fertility, terracing, contour bunding, growing soil conservation crops can be taken up.
- (b) Drainage – It is a problem in the valleys where paddy is generally raised. Drainage channels have to be provided wherever necessary.
- (c) Levelling and alignment of land to economic size can be thought of.

IV. Crops

Coffee with pepper, as an inter crop is quite suitable. Rubber, cardamom, eucalyptus can also be cultivated in the 400 hectares blocks ; based on survey of the 40 hectares, the crops proposed, for the 400 hectares are as follows:-

Coffee with pepper as an inter crop	-	280.00	hectares
Rubber	-	50.00	”
Eucalyptus	-	25.00	”
Cardamom	-	10.00	”
Paddy	-	20.00	”
Coconut	-	<u>15.00</u>	”
	-	<u>400.00</u>	hectares

Lemon grass, tapioca, cocoa, ginger, etc. can be grown as an inter crop in rubber, eucalyptus plantations.

V. Joint Farming Society – Organization

The scheme is to be implemented through a registered joint farming society. All the members of the Kurichia families are to be enrolled as members of the society. The ownership of the land will be vested with the society and all the members will be provided with work in the land according to availability of work. The profit realised from the farm will be divided to the members.

The society will be managed by a committee constituted from among the members, representatives of Panchayat, Service Co-operative Institution. Officials from Tribal and Agricultural Department will also be members of the society. Necessary staff to run the office should be provided.

VI. Sources of Credit

Adequate funds for the development of the area and successful implementation of the scheme have to be provided to the society. The entire finance should come from the Tribal Welfare Department, Co-operative Institutions, Nationalised Banks, etc. by way of grant, subsidy, loan, etc.

VII. Technical Staff

The Technical Staff required for implementing the scheme is as follows :-

Farm Superintendent (Rs. 560-1,100)	-	1 No.
Junior Agricultural Officers (Rs. 435-770)	-	2 Nos.
Agricultural Demonstrators	-	4 Nos.
Demonstration Maistries	-	4 Nos.

The technical staff will be responsible for proper supervision and Agricultural Development of the area.

VIII. Cost of cultivation of crops

			(Rs. in lakhs)
1.	Coffee interplanted with pepper	: 280.00 Hect. Rs. 7,500	@ 21.00
2.	Rubber	: 50.00 Hect. Rs. 10,000	@ 5.00
3.	Eucalyptus	: 25.00 Hect. Rs. 7,500	@ 1.87
4.	Cardamom	: 10.00 Hect. Rs. 10,000	@ 1.00
5.	Paddy	: 20.00 Hect. Rs. 2,500	@ 0.50
6.	Coconut	: 15.00 Hect. Rs. 5,000	@ 0.75
7.	Lemon – grass	: 25.00 Hect. Rs. 1,800	@ 0.45
8.	Tapioca	: 50.00 Hect. Rs. 3,000	@ 1.50
9.	Banana	: 15.00 Hect. Rs. 5,000	@ 0.75
10.	Cocoa	: 15.00 Hect. Rs. 2,000	@ 0.375
		:	35.195

IX. Further details and Project Report should be prepared on these lines.

ANNEXURE IV – A

Government of Kerala

Abstract

The Kerala Private Forests (Vesting and Assignment) Act, 1971 – Association of Sri.S.V.Govinda Rajan, Emeritus Scientist as Consultant to the work of the Committee – orders issued.

AGRICULTURE (FOREST SPECIAL)DEPARTMENT

G.O. RT. 267/74/AD Dated Trivandrum, 7th February 1974

Read : Again G.O RT. 2624/73/AD dated 28th November 1973

ORDER

In the G.O read above orders were issued constituting a Committee viz. Vested Forest Committee for reporting to Government on the reservation of such extent of Private Forests as may be necessary for purposes directed towards the promotion of agriculture or the welfare of the agricultural population or for purposes ancillary thereto, including agricultural research, farm forestry, irrigation, infrastructure, etc. The Committee will also report on the land to be assigned, with crop pattern etc. in such lands.

Government propose to associate Dr. S.V. Govinda Rajan, Emeritus Scientist, Regional Soil Correlation Centre, Hebbal, Bangalore – 24, as Consultant to the Committee's work and he has expressed his willingness for the same. The above proposal is approved. The terms and conditions of his appointment as 'Consultant' to the committee will be the following :-

- (i) His duty station will be at Bangalore.
- (ii) For tours and journeys actual fares by rail, road or air will be paid plus Rs.75 for every day spent in journeys or stay in connection with the work: subject to a limit of Rs.1500 for daily allowance.
- (iii) Facilities to stay at Government Rest Houses and hospitality will be extended for the period of halt. He will be accommodated at Government Rest Houses at the same rate applicable to Class I Officers of the State Government on duty.
- (iv) Medical facilities as are admissible to Class I Officers will be extended to him.

(By order of the Governor)

T. MADHAVA MENON

Special Secretary to Government

To

The Chairman and Members of the Committee etc. etc. etc.

ANNEXURE IV – B

Note on the observations made during visit to the vested forest lands in Palghat, Malappuram, Kozhikode and Cannanore Districts from 16th November 1974 to 23rd November 1974.

Palghat District

Ayyermala – Soils in the Ayyermala Forest Lands (Block 11 and 12) are of very variable depth, particularly in the western and northern areas of Block 11. The slopes vary from 5 per cent to over 45 per cent and heavy sprinkling of rocks and large stones occur. Excepting for a narrow fringe in the west and north which could be allotted, (assigned) the rest of the area is best kept for raising trees with value as fuel. Since the southern face is covered by escarpments of massive bare rocks, this area is not fit for allotment and is best maintained in its present condition. Some parts of the area which is considered fit for allotment can be brought under tapioca and paddy. Other adjoining areas on the slopes and which have adequate soil depth, in spite of the stone spread, can be brought under plantation crops like rubber and cashew. An actual soil survey can help to demarcate areas fit for allotment for cultivation by annual crops and those fit for raising perennial crops.

Vallikode Mala – Parts of this mala are bare rock and other portions on the west are steep. Parts of the southern face though covered with soil are steep and miscellaneous fuel trees are growing. In the lower reaches of these slopes, the soil is reddish sandy loam and is underlain by soft to medium hard laterite. Parts of this area appears to have been cleared years ago and cultivated with tapioca resulting in severe erosion which has forced the abandonment of cultivation. When the land is gently sloping (3-5 per cent slope) cultivation with moderate measures seems safe. Lands on higher slopes up to 10 per cent slopes can be put under cultivation [Tapioca, togari (Arhar) among the possible crops] because of available soil depth, but intensive soil conservation measures, (terracing, bunding) need to be adopted, with provision for graded grassed water-ways, to lead off the storm waters which necessarily flow from the upper slopes, causing severe damage to the lands at the toe slopes.

Other lands on level ground or gentle slopes exist in the area to the south of the Olavakkode – Parli road which are afforested and which are fit for allotment to grow annual crops. Procedures for moderately intensive soil conservation measures will need be drawn up and recommended to be followed by the cultivators when the

lands are allotted (assigned) to them so as to ensure that the soil is maintained in a productive state in spite of cultivation.

Mangalam Dam catchment area – The catchment of this reservoir, storing waters for irrigation, comprises of areas under Puzhakkalidam and Nellikkalidam. Puzhakkalidam consists in a large measure of Vested Forests, interspersed with areas under private rubber estates and areas under cultivation with tapioca. The tapioca cultivation, which appears recent, is carried on over land on steep slopes where the slope percentage is often in excess of 50 per cent. Such cultivation is seen to result in severe gullyng and extensive erosion. Cultivation under such adverse conditions requires to be stopped as early as possible and the whole area brought under protection. The damage already caused through soil erosion would require to be remedied to prevent further scouring and loss of soil by taking up conservation measures like gully plugging, construction of stone revetments and raising check dams. Extensive erosion and numerous shallow gullies are also seen in the plantations taken over under the Vested Forests Act and it would appear useful to undertake soil conservation measures to prevent further deterioration and transportation of silt into the reservoir area.

Nellikkalidam area is extensively cultivated and put under erosion permitting crops. Since there must be considerable loss of soil from such cultivated lands and their periodical removal into the live storage space of the reservoir, it is a matter for serious consideration what steps are to be taken to retard the silting up of the reservoir bed and prolonging the useful life of the reservoir.

The Vizhumala range in Alathur taluk represents an area where some portions can be allotted for cultivation, since the soil which are red loamy and sandy loam and deep, appear suitable for tillage. The area is however dry on the southern side and much of the remaining area not given for cultivation would be suitable for raising cashew.

The Andhimalankunnu covering an area of ground 450 acres, appears to be suitable for multistoried cropping and can be used as a site for demonstrating the possibility of co-operative farming. Tapioca, Tur (Arhar), Til, among annual crops and coconut plantations, areca, pepper, cocoa and cinnamon among perennials appear as distinct possibilities. The area however suffers from difficulty of water supply for irrigation,

since there are no sources of water, nearby. A few narrow valleys occurring in this area have already been exploited by settlers to convert into paddy flats and terraces, with some areca and coconut, raised around utilising the better moisture regime prevailing here. The possibilities of utilising this land for colonisation on a co-operative basis was discussed at length on 23rd November 1974 with the Director and Officers of the Central Plantation Research Institute, Kasargode and I understand that the proceedings of this meeting has been made available to the Custodian for his consideration, by Sri. O.V.Ummerkutty, Member, Vested Forests Committee who also attended this meeting.

Attappady Valley : Proposed Tribal settlements in Karuvara and Chindakki – Both these are located in the narrow valleys along the Mandaraputtu stream and the Bhavani river respectively. Dark brown silty and silty clay loam soil with good soil depth and with high organic matter content is found in the area and these seem suitable for cultivating a variety of crops including paddy tur (togari), cholam, til, ginger and turmeric. Help could be given to the tribals to utilize the water resources available in the area through construction of anicuts, diversion weirs and irrigation channels laid on contour. Advice on adoption of measures of conservation farming will also be beneficial for their following agricultural operations successfully.

Attappady valley, in the catchment of the Kundah Project and the Lower Bhavani reservoir, is one of the most extensively exploited of catchment areas. It is necessary to keep, as large a portion of this area as possible, as is at present afforested, in an undisturbed condition so as not to extend the areas suffering from soil erosion through indiscriminate cultivation. However to meet the pressure of meeting the needs of unsettled tribals, it may be necessary to release for allotment some of the vested forest lands which lie over relatively level terrain or which occur in the low rainfall region as near Anakatty. Soil conditions over parts of this latter region is suitable for tillage and cultivation by annual crops, but allotment should be made subject to adherence to strict soil conservation measures.

Malappuram District

Perinthalmanna area: Amminikkadu mala – Mannarmala (Unnikkali mala) – Amminikadumala appears to be largely exploited and extensively cultivated.

Originally a private forest area, much of the land has long been given away for cultivation resulting in denudation of vegetation and serious soil loss. Forest vegetation appears to be confined to severely eroded gullied land which occurs sporadically over the area. Indiscriminate use of land on this hill, regardless of slope and erosion hazards, has resulted in a variety of problems of soil management cropping up. It is not clear how this process of soil deterioration can be reversed, excepting that the need for preventing such problems raising in other vested forest lands in neighboring hills is highlighted and requires to be viewed with earnestness.

Mannar mala at the rear of Amminikkadu is also exploited substantively. The eastern half of the range is afforested and remains as vested forest land, while the western part and the land at the foot of the hill are cultivated. Coconut has been planted wherever soil is found, irrespective of slope conditions. The afforested area in the hill slopes requires to be retained in the present condition, with cautious exploitation of the trees as sources of fuel. Such of the forest lands as may be considered fit for allotment at the foot of the hills, would need to be put under intensive conservation measures for preventing soil loss.

Kozhikode District

Nilambur : Vadapuram – Thirikykooth – Koorutty – The vested forest lands in the above locations are on level terrain, along the banks of Kudiraipuzha, the extent of land in each block being small and in the range of 20 to 30 acres. The soils are dark brown, silty loam, deep and well drained. These soils appear intrinsically fertile, are responsive to fertilization and can easily be managed to produce a variety of crops. If irrigation is provided by lifting water from the nearby stream, sugar-cane, among other irrigated crops, can be raised. Irrigated cropping is in vogue in the neighborhood and once the profitability of raising sugar-cane is established other lands under private ownership, will also brought under sugar-cane in a rotation with paddy and other irrigated crop.

A large extent of level to gently sloping lands covering an area of about 3500 acres in the Pothukkal Eucalyptus plantation area at the upper reaches of Chaliyar river, is said to exist. An approach to this area was made by jeepable road, but could not be reached due to marshiness of the track leading to the area. It was indicated that

during the dry season beginning in January, the area would be accessible by foot and hence the proposal to visit the area to inspect the terrain and soil conditions was postponed. Other areas under eucalyptus planted by the Gwalior Rayons, approached from Edakkara where is inspected and stretches of vested forests land falling under the 250 ft. Contours are found to have suitable soil and drainage conditions for being brought under irrigated cultivation. These stretches are, however, narrow in places, because of the proximity of the foot of the hills to the lands already under private occupation. A system to lead the stream waters draining hill slopes to serve as irrigated sources, will need to be developed in case these stretches of vested forest lands are brought under sugar-cane.

Sultan's Battery – Manantoddy – Other Vested Forest lands as at C.C. Mukku (near Sultan's Battery) and Talapuzha (on the Manantody – Peria road) were visited and it is seen that the soil conditions in these areas are suitable for allotment (assignment) to private cultivators for raising plantation crops like coffee or tea in the same manner as such crops are grown in the adjoining areas. Subject to the application of the principle of keeping lands in an afforested condition such vested forest land as exist in contiguity with Reserved Forests, other isolated patches of vested forest lands in the Peria area as are adjacent to existing private holdings would appear to be suitable for allotment for cultivation of the crops suited to the locality.

(Sd.)
S.V. GOVINDARAJAN

Note on the observations made of the soil and vegetation conditions in the vested forest areas – Kozhikode District, 27th and 28th April 1975.

Tamarasseri Division

1. *Payyona area* – The vested forest lands lie to the north and north-west beyond the Amalgamated Estates being rubber plantations belonging to Sri. M.C. Pothen. Parts of the forest land adjoining the occupied areas under Sri. Pothen's Estate are on moderate slope, possess a fairly good depth of soil (20 to 50 cm and more of soil depth) and appear suitable for assignment. The soils are well drained, fertile and can be readily brought under cultivation after clearing the vegetation cover and undergrowth. Parts are somewhat rocky with liberal distribution of cherts and stones.

The rocks here are readily weatherable granite greiss possessing a saccharoidal texture in the weathered material. On a rough estimate about 50 acres may be made available for assignment. Cultivation of cocoanut, rubber with inter crop of cocoa appear possible, with homestead gardens put under tapioca and bananas on the same lines as are already under existence in the area. Some parts can be put under coffee. The remaining areas of the afforested lands appear too steep and rather stony and rocky. These areas are best left under natural evergreen vegetation conditions.

2. Pudupady – Adivaram and the Ghat Section – The Vested Forest areas cover the west face of the hill range which leads on to the Wynad plateau. The area possesses evergreen vegetation which covers the steep slopes. It could appear preferable not to disturb the existing biota. Some areas to the north of this range of hills had been cleared for cultivation and the evidences of severe erosion that has followed tillage of the lands are only too obvious. Small patches appear to have been cleared and cashew planted on land near the top of the ranges at about 550-600 meter elevation, but the lack of soil conservation measures and the non-adoption of contour cultivation and contour planting, has brought about severe soil loss.

3. *Pookkodu Lake area* – This area is located at the top of the ghats above 720 m. elevation and consists of a number of interlinked and rounded hillocks with thin vegetation cover on the soils and top, at the base of which fairly thick cover of vegetation exist. Pookkodu lake nestles in the midst of a group of these hillocks and it has been formed artificially by bunding up the narrow outfall. The lake is being used for developing fisheries. A number of hill tribes families have settled on the slopes of the hills facing the lake and it would seem worthwhile to encourage maintenance of dairy cattle since there is adequate pasture in the vicinity. The vegetation on the rounded hill tops appear to have been overtaken by coarse grass, but it should be possible to improve this vegetation by introducing improved grass varieties. Better moisture conservation on the slopes of the partly bare hillocks through contour bounding, and in places trenching on the contour, can encourage the establishment of better grass species. It should be possible to irrigate areas at the foot of these hillocks and raise hybrid Napier grass under irrigation which can furnish nutritious fodder for a larger number of cattle, than is possible to maintain at present. The area possesses potentialities for developing cultivation of coffee and dairy production, besides scope

for development as a recreation area and place of tourist interest. The area is within 2-3 km. of Vythiri and is within 60 km of Calicut to where milk and dairy products can be readily transported and sold.

4. *Kayappa thodu* – Paikkadam Malavaram (Tamarasseri) Block :- This Vested Forest area is located about 10 km. to the east of Mukkam and consists of about 730 acres distributed on the slopes and foot hill areas of two or three inter – connected hillocks. The area possesses good approach roads, the dense forest areas having been cleared away a few decades earlier and well developed into estates planted with rubber, cocoanut, areca, cashew, etc., besides being developed for cultivation of annual crops. A number of small and large rubber plantations exist in the area and there appears scope for development of small rubber plantations by assignees who may get Vested Forest land allotted to them. Facilities for curing rubber exist in a private smoke house located in the area. Alternatively a smoke house can be set up by assignee on a co-operative basis. Small areas under teak plantation exist on fairly level ground on the road side, and these after clear felling can be assigned to settlers for growing cocoanut, areca and rubber. The soil are deep with sparse rock out crops and the moisture regime is also satisfactory for raising the above plantations – areca being planted in the low level areas subject to heavier moisture regime, with cocoanut and rubber trees grown on the well drained slopping lands. Much of the remaining area along the slopes are located on rather steep slopes and rocky ground and would require to be maintained under existing evergreen forest conditions. However with actual traverse of the slopes, it will be possible to locate patches of 2 to 4 hectares of land with moderate slopes where rubber plantation can be successfully raised.

(Sd.)
S.V. GOVIDA RAJAN,
Emeritus Scientist

ANNEXURE V – A

List of rivers

Sl. No.	Name of the river and its main Tributaries	Length in Km	Total catchment area in sq. km.	Catchment area within Kerala in Sq. km.	Name of District in Kerala through which river flows
1	2	3	4	5	6
West flowing rivers :-					
1	Manjeswar	16	90	90	Cannanore
2	Uppala	50	250	76	Cannanore
3	Shiriya	67	587	290	Cannanore
	(a) Pallathadka Hole				
	(b) Kallajethodu				
	(c) Kanyanathodu				
	(d) Eramatti Hole				
4	Mogral	34	132	132	Cannanore
5	Chandragiri	105	1406	570	Cannanore
	(a) Chandragiri Hole				
	(b) Payaswini				
6	Chittari	25	97	97	Cannanore
7	Nileswar	46	190	190	Cannanore
	(a) Aryangalthodu				
	(b) Baigote Hole				
8	Kariangode	64	561	429	Cannanore
	(a) Mundore				
	(b) Padiamala Hole				
	(c) Mundroth Hole				
9	Kavvayi	31	143	143	Cannanore
10	Peruvamba	51	300	300	Cannanore
	(a) Macharuthodu				
	(b) Challachal				
	(c) Mukkutenkarachal				
	(d) Nitaringapuzha				
11	Ramapuram	19	52	52	Cannanore
12	Kuppam	82	539	469	Cannanore
	(a) Pakkattupoya				
	(b) Alakuttathodu				
	(c) Kuttilelepuzha				

	(d) Mukkuttathodu				
	(e) Chiriyathodu				
13	Valapattanam	110	1867	1321	Cannanore
	(a) Sreekandapuram				
	(b) Barapole				
	(c) Venipuzha				
	(d) Aralampuzha				
14	Anjarakandy	48	412	412	Cannanore
	(a) Kapputhodu				
	(b) Idumbathodu				
15	Tellicherry	28	132	132	Cannanore
16	Mahe	54	394	394	Cannanore & Kozhikode
17	Kuttiadi	74	583	583	Kozhikode
	(a) Onipuzha				
	(b) Thottilpalampuzha				
	(c) Kadiyangadpuzha				
	(d) Vannathipuzha				
	(e) Madappallipuzha				
18	Karapuzha	40	624	624	Kozhikode
19	Kallai	22	96	96	Kozhikode
20	Chaliyar	169	2923	2535	Malappuram & Kozhikode
	(a) Chalipuzha				
	(b) Punnapuzha				
	(c) Pandiyar				
	(d) Karimpuzha				
	(e) Cherupuzha				
	(f) Kanhirapuzha				
	(g) Kurumbanpuzha				
	(h) Vadapurampuzha				
	(i) Iringipuzha				
	(j) Iruthullypuzha				
21	Kadalundi	130	1099	1099	Malappuram
	(a) Olipuzha				
	(b) Veliyar				
22	Tirur	48	117	117	Malappuram

23	Bharathapuzha	209	6186	4440	Palghat & Malappuram
	(a) Gayathripuzha				
	(b) Chitturpuzha or Kannadi River				
	(c) Kalpathypuzha				
	(d) Thuthapuzha				
24	Keecheri	51	401	401	Trichur
	(a) Chonnethodu				
25	Puzhakkal	29	234	234	Trichur
26	Karuvannur	48	1054	1054	Trichur & Palghat
	(a) Manali				
	(b) Kurumali				
27	Chalakuadi	130	1704	1404	Trichur, Palghat & Ernakulam
	(a) Parambikulam				
	(b) Sholayar				
	(c) Kuriarkutty				
	(d) Karappara				
	(e) Anakkayam				
28	Periyar	244	5398	5284	Idikki & Ernakulam
	(a) Muthirapuzha				
	(b) Thotti Aar				
	(c) Idamala Aar				
	(d) Mullayar				
	(e) Perumthara Aar				
	(f) Kattappanayar				
	(g) Cheruthoni Aar				
	(h) Perinjankutty Aar				
29	Muvattupuzha	121	1554	1554	Idikki & Ernakulam
	(a) Thodupuzha				
	(b) Kaliyar				
	(c) Kothamangalam				
30	Meenachil	78	1272	1272	Kottayam & Alleppey
	(a) Kalathukadavu Aar				
	(b) Trikovil Aar				

	(c) Poonjur				
31	Manimala	90	847	847	Idikki, Kottayam & Aleppey
32	Pamba	176	2235	2235	Quilon & Aleppey
	(a) Pamba Aar				
	(b) Kakki Aar				
	(c) Arudai Aar				
	(d) Kakkad Aar				
	(e) Kala Aar				
33	Achankoil	128	1484	1484	Quilon & Alleppey
34	Pallickal	42	220	220	Quilon
35	Kallada	121	1699	1699	Quilon
	(a) Kulathupuzha				
	(b) Chendurni				
	(c) Kalthuruthy				
36	Ithikara	56	642	642	Quilon
	(a) Vattapparambu				
	(b) Kundumanthode				
37	Ayroor	17	66	66	Trivandrum
38	Vamanapuram	88	687	687	Trivandrum
	(a) Kalaipara Aar				
	(b) Pannivadi Aar				
	(c) Ponmudi Aar				
	(d) Upper Chit Aar				
	(e) Manjappara				
	(f) Kilimanoor Aar				
39	Mamom	27	114	114	Trivandrum
40	Karamana	68	702	702	Trivandrum
	(a) Kavi Aar				
	(b) Attai Aar				
	(c) Vaiyapady Aar				
	(d) Todai Aar				
	(e) Killi Aar				
41	Neyyar	56	497	497	Trivandrum
	(a) Kallar				
	(b) Karavali Aar				

II East flowing rivers :-

42	Kabbini	1920	Kozhikode & Cannanore
	(a) Panamaram		
	(b) Manantoddy		
	(c) Babali		
	(d) Noolpuzha		
43	Bhavani	562	Palghat
	(a) Siruvani		
	(b) Varagar		
44	Pambar	384	Idikki
	(a) Myladi		
	(b) Chengalar		
	(c) Thenar		

ANNEXURE V – B
List of Major Irrigation and Hydel Schemes in
River basins of Malabar Area

Sl. No.	Name of the river and its main Tributaries	Name of the Project	Remarks
1	Chandragiri		
	(a) Payaswini	Payaswini	Irrigation Project under investigation
	(b) Chandragiri Hole	Chandragiri	- do -
2	Kariangode	Kakkadavu	- do -
3	Valapattanam	(i) Lower Balapole	Hydel Scheme under investigation
		(ii) Pazhassi	Irrigation Scheme under execution
	(a) Koottupuzha	Aralam	Irrigation Scheme under investigation – Part of catchment falls within Vested Forests.
4	Kuttiadi	(i) Kuttiadi Hydel Project	Completed Hydel Scheme – Catchment falls within Vested Forests.
		(ii) Kuttiadi Irrigation Project	Irrigation Project under execution
5	Korapuzha		
	(a) Punnurpuzha	Punnurpuzha	Irrigation Scheme under investigation
6	Kadalundi		
	(a) Palakuzhipuzha	Palakuzhipuzha	Irrigation Scheme under investigation
	(b) Olipuzha	Olipuzha	Irrigation Scheme under investigation
7.	Chaliyar	Areacode Barrage	Irrigation Scheme under Investigation – Part of the catchment within Vested Forests.
	(a) Karakottupuzha	Padiyar - Punnapuzha	Hydel Scheme under Investigation – Project is within Vested Forests
	(b) Cholathipuzha	Cholathipuzha	Hydel Scheme under Investigation – Project is within Vested Forests
	(c) Chalipuzha	Chalipuzha Hydel Scheme	Hydel Scheme under Investigation – Project is within Vested Forests
		Chalipuzha Irrigation Scheme	Irrigation Scheme under Investigation – Project is within Vested Forests
	(d) Iruthullipuzha	Iruthullipuzha	Irrigation Scheme under Investigation – Part of the catchment within Vested Forests
	(e) Iringipuzha	Iringipuzha	Irrigation Scheme under Investigation – Part of the catchment within Vested Forests

	(f) Kanhirapuzha	Kanhirapuzha	Irrigation Scheme under Investigation – Part of the catchment within Vested Forests
	(g) Maruthapuzha	Maruthapuzha	Irrigation Scheme under Investigation – Project is within Vested Forests
	(h) Karimpuzha	Karimpuzha	Irrigation Scheme under Investigation – Part of the catchment within Vested Forests
	(i) Vadapuram	Vadapuram	Irrigation Scheme under Investigation – Part of the catchment within Vested Forests
8	Bharathapuzha		
	(a) Kunthipuzha	Silent Valley	Hydel Scheme under execution – Part of the catchment falls within Vested Forests.
	(b) Cherukunnupuzha	Mangalam	Completed Irrigation Project – Catchment within Vested Forests
	(c) Ayapur	Pothundy	Completed Irrigation Project
	(d) Meenakara	Gayathri I Stage	- do -
	(e) Chulliyar	Gayathri II Stage	- do -
	(f) Malampuzha	Malampuzha	Completed Irrigation Project – Within Vested Forests
	(g) Walayar	Walayar	Completed Irrigation Project – Catchment within Vested Forests
	(h) Chitturpuzha	Chitturpuzha	Irrigation Scheme under execution
	(i) Kanhirapuzha	Kanhirapuzha	Irrigation Scheme under execution. Project is located within Vested Forests.
	(j) Anamooli	Kerala Bhavani	Proposed Irrigation Scheme to utilize to Tail race water of Kerala Bhavani Hydel Scheme.
	(k) Vazhapullam	Vazhapullam	Proposed Irrigation Scheme
	(l) Thuppanadupuzha	Thuppanad	Proposed Irrigation Scheme
	(m) Kallanpotty	Silent Valley	Proposed Irrigation Scheme to utilise the Tail race water of Silent Valley Hydel Scheme.
9.	Kabbini		
	(a) Manantoddy	Manantoddy	Proposed Hydel Scheme – Part of catchment in Vested Forests
	(b) Karapuzha	Karapuzha	Irrigation Scheme under investigation
	(c) Karamanathodu	Bhanasura sagar	Proposed Irrigation Project – Part of catchment falls within Vested Forests
	(d) Thirunelli	Thirunelli	Irrigation Projection under investigation.

	(e) Noolpuzha	Noolpuzha	- do -
	(f) Manjat	Manjat	- do -
	(g) Thondar	Thondar	- do -
10	Bhavani	Kerala Bhavani	Proposed Hydel Scheme – Part of catchment falls within Vested Forest.
	(a) Siruvani	Attappady	Irrigation Project under execution, Vested Forests will be submerged by the Scheme.
	(b) Varaharappallam	Arali	Proposed Irrigation Scheme – Catchment within Vested Forests.

ANNEXURE VI

**LIST OF AREAS RECOMMENDED FOR
RESERVATION / ASSIGNMENT**

**Areas Recommended for Permanent Reservation
TELLICHERRY SPECIAL DIVISION**

Sl. No.	Name of forest	Village	Area in hect.	Moisture Conservation	Reasons for suggesting permanent reservation				
					Major Projects	Soil Conservation	Suitability of forests	Special reasons	
1	2	3	4	5	6	7	8	9	
Thaliparamba Range (Hosdurg Taluk)									
1.	Kolithattil Erunaimala R.S.I/1Part	Eruvassy	160.00	Forms the catchment of Sreekantapuram river which joins Baliapattam river	Under investigation on Iritty, Lower Barapole Hydro electric Scheme	Very steep	Evergreen forests of varying density interspread with grasslands	Forms the State boundary. Together with the Reserve Forests of Karnataka forms a good belt of forest along the top of the ghats	
2	Kayyerikara Kadavum Kakkottupathi mala R.S-127/1	Vayakkara	120.00						- do -
Total for Thaliparamba Range			280.00						
Koothuparamba Range									
3	Chadiroomala U.S	Aralam	360.00	Forms the catchment of Iritty river and Koottupuzh a river which ultimately drains in to Baliapattam river. The estuary forms the Baliapattam minor port Forms the catchment of Ancharakan dy river	Nil	Steep slopes liable to accelerated erosion, if denuded, Soil conservation works will be too costly	Excellent semi-evergreen and evergreen forests along the western slopes of the ghats	-do-	
4	Neerkunnumala	- do -	574.08		Nil			-do-	
5	Odanthodumala (A.K. Forests)	- do -	3461.00		Nil	-do-			
6	Poilurmala (Pathikkal) R.S. 275/ IA	Triprangatur	50.00		Nil	- do -	Degraded deciduous forests	Contiguous to Kannothe Reserve forests	
Total for Koothuparambu Range			4445.08						
Manantoddy Range (North Wynad Taluk)									
7.	Cheruvattam R.S. 8/IA/IA2	Peria	288.00	Forms the catchment of Kottiyoor river and Valad river which drains into Mannantoddy river	Under investigation -on, Valad and Mannantoddy Hydro electric	-do-	Degraded semi-evergreen to good evergreen forests	-do-	
8.	Kunnipuramala R.S. 12/IA/IA	-do-	160.00			-do-		-do-	
9.	Pappathodumala R.S.I/IAIA	-do-	40.00		-do-	-do-	-do-	-do-	
10.	Kunnigattu Hills R.S. I/IC.IA.I	-do-	10.00		-do-	-do-	-do-	-do-	

Sl. No.	Name of forest	Village	Area in hect.	Moisture Conservation	Reasons for suggesting permanent reservation			
					Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
11.	Koormanmala R.S. 5/IA & 5/IB	-do-	8.00	-do-	-do-	-do-	-do-	-do-
12.	Kurudimannankunnu R.S. 179	-do-	5.00	Swampy area at the watershed boundary of east flowing and west flowing rivers	Nil	Swampy area unfit for cultivation without expensive drainage measures	..	Adjoins reserve forests and areas proposed for reservation.
13	Fring Frod Estate R.S. 96/IA I & 97/IAI	Tavinhal	125.44	Forms the catchment for Kottiyoor river and Valad river and their tributaries	Under investigation on Valad and Manantoddy Hydro electric	Steep slopes liable to accelerated erosion, if denuded. Soil conservation works will be too costly	Suitable for natural as well as artificial regeneration	Adjoins Reserve Forest of Begu Range
14	Forest Flower Estate R.S. 91/IA	-do-	40.00				- do -	- do -
15.	Saroja Estate R.S. 88/IA	- do -	200.00	- do -	- do -	- do -	- do -	- do -
16.	New Dindimal R.S. 1/IB & 2, R.S. 334	- do -	278.21	- do -	- do -	- do -	- do -	- do -
17.	Talapuzha Estate R.S. 65/13, 65/1	- do -	88.53 6.71	- do -	- do -	- do -	- do -	- do -
18.	Jessie Estate R.S. 4/1, 13/1, 105/1, 105/1B1, 89/10, 89/1	Vemom	360.00	- do -	- do -	- do -	- do -	- do -
19	Vayakara Estate R.S. 2	-do-	20.00	- do -	- do -	- do -	- do -	- do -
20.	Nellikunnu R.S. 89/19A & 89/18B	-do-	14.00	- do -	- do -	- do -	- do -	- do -
21.	Mangalasseri-mala R.S. 76/IAIF	Vellamunda	112.00	Forms the catchment of Panamaram river which drains into Kabani and the Niravilapuzha which joins Valad river and drains into Baliapattam thus forming the	Valad Project	- do -	Most deciduous and semi evergreen forests	..
22.	Vellamunda R.S. 574	- do -	48.0.0		- do -	- do -	- do -	- do -
23.	Pullinjalmalavaram R.S. 596, 598, 579,588,594,590, 610,577,615,580 & 582	- do -	513.00		- do -	- do -	- do -	- do -
24.	Mangalassery malavaram R.S. 575	- do -	9.00		- do -	- do -	- do -	- do -

Sl. No.	Name of forest	Village	Area in hect.	Moisture Conservation	Reasons for suggesting permanent reservation			
					Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
25.	Marithottam R.S. 509	Thondernad	10.00	catchment boundary between east and west flowing rivers	Valad and Kuttiady Hydro – electric (Augmentation)	Steep and rocky; unfit for cultivation	Most deciduous to evergreen forests and grasslands	Highest peak in the Range Banasuran kotta occurs on this hill range.
26.	Thondernad R.S. 1156	- do -	20.00	- do -	- do -	- do -	- do -	- do -
27.	Ottuparakunnu R.S. 770/2A5	- do -	20.00	- do -	- do -	- do -	- do -	- do -
28.	Kapputharakunnu Perincherrykunnu R.S. 880/1	- do -	10.00	- do -	- do -	- do -	- do -	- do -
29.	Chundamottankunnu R.S.867/IB	- do -	20.00	- do -	- do -	- do -	- do -	- do -
30.	Pannimottankunnu R.S.1104	- do -	160.00	- do -	- do -	- do -	- do -	- do -
31.	Chanthankari-mala R.S.1106	- do -	10.00	- do -	- do -	- do -	- do -	- do -
32.	Chakkipottankunnu R.S. 1086/1A4	- do -	20.00	- do -	- do -	- do -	- do -	- do -
33.	Puliarkotta R.S. 1122	- do -	80.00	- do -	- do -	- do -	- do -	- do -
34.	Chattamkozhipettamala R.S. 1130	- do -	200.00	- do -	- do -	- do -	- do -	- do -
35.	Kappadamala R.S. 1170/2A & 1170/20 & 1101	- do -	726.00	- do -	- do -	- do -	- do -	- do -
36.	Meecherimalayil Perincherimala R.S. 1149	- do -	32.00	- do -	- do -	- do -	- do -	- do -
37.	Cheriyameethal malavaram R.S.1127	Thondarnad	12.00	Boundary between east and west flowing rivers	Valad and Kuttiady Hydro – electric (Augmentation)	Steep and rocky; unfit for cultivation	Most deciduous to evergreen forests and grasslands	Highest peak in the Range Banasura kotta occurs on this hill range.
38.	Cheriy Chittan malavaram R.S. 1128 & 1129, R.S. 1131	- do -	12.00	- do -	- do -	- do -	- do -	- do -
39.	Neduneermala R.S. 1136, 1140 - 1170/IA IB	- do -	126.00	- do -	- do -	- do -	- do -	- do -
40.	Mundakamala R.S.1137 & 1155	- do -	50.00	- do -	- do -	- do -	- do -	- do -
Total for Manantoddy Range			3833.89					

Total area for Permanent Reservation in Tellicherry Special Division

Taliparamba Range	:	280.00 Hectares
Koothuparamba Range	:	4445.08 ”
Manantoddy Range	:	3833.89 ”
Total	:	<u>8558.97 ”</u>

**List of areas in Vested Forests proposed for assignment
TELLICHERRY SPECIAL DIVISION**

Sl. No. (1)	Name and locality (2)	Village (3)	Survey No. (4)	Taluk and District (5)	Area (in Ha.) (6)	Crop Pattern (7)
Taliparambu Range						
41	Ranipuram Colony mala (Madathimala)	Panathady	292	Hosdurg Cannanore	125.00	Good tree growth, Cardamom and Cocoa
42	Panathur Mala	- do -	314	- do -	18.00	Sparse tree growth, Coconut, Pepper and Cashew
43.	Perinthedimala	- do -	291/2	- do -	100.00	Coconut, Pepper, Rubber and Cashew.
44.	Ottamala, Chattarimala	- do -	273/IA	- do -	60.00	- do -
45.	Achanparamala	- do -	274/45	- do -	20.00	- do -
46.	Popular Estate	Maloth	124, 125, 146	- do -	160.00	Good tree cover, Cardamom, Pepper, Coffee
47	Manjucholamala	- do -	193, 200	- do -	120.00	Cardamom, Pepper, Coffee and Cashew
48.	Punjamala (Panchamala)	- do -	147/7A	- do -	60.00	Rubber, Coconut and Cashew
49.	Prakash Plantations (Vellankundamala)	- do -	112/ IA	- do -	118.00	- do -
50.	Maruthottumala	- do -	123,114	- do -	20.00	- do -
51.	Sea View Estate	- do -	193	- do -	48.00	Coconut, Pepper and Cashew
52.	Mykkayanmala	- do -	190	- do -	86.00	Cardamom, Pepper, Cashew, Tapioca annual crop.
53	Kavunthala (Karinthala)	East Eleri	109	- do -	32.00	- do -
54	Kotamala	West Eleri	587/2P 588 Part	Hosdurg Cannanore	160.00	Coconut, Rubber, Pepper and Cashew, Tapioca as annual crop.
55.	Chedikundu	- do -	2/1, 207/1	- do -	5.00	- do -
56	(a) Kottathalachimala	Vayakkara	129/1	Taliparamba Cannanore	73.92	Coconut and Cashew (*)
	(b) Thekkanmavu	- do -	129/1	- do -	11.00	Pepper and Coconut with Tapioca (*)
57.	Thannickal Illathara, Pavathikula etc., Mathuvam	- do -	130	- do -	49.34	- do (*)-
58.	Karamaramthattu	Naduvil	292/1 Part	- do -		
59.	Mylampalli	- do -	292/1	- do -	280.00	Pepper, Coconut, Cashew and Tapioca.
60.	Thurumbi	- do -	- do -	- do -		
61.	Kudiyamala	Naduvil Eruvassy	292/IA4	- do -	320.00	Coffee, Pepper, Coconut and Cardamom
62.	Mathilerumthattu	Eruvassy	1/1 part	- do -		
63.	Kanhirakolli	- do -	- do -	- do -	280.00	Rubber, Coconut and Pepper
64.	Kunnathur	Nuchiyad Kalliad	- do -	- do -		
Total for Taliparamba Range					2,146.66	

(*) Approved at the IVth meeting of the Vested Forests Committee for assignment

Sl. No. (1)	Name and locality (2)	Village (3)	Survey No. (4)	Taluk and District (5)	Area (in Ha.) (6)	Crop Pattern (7)
Koothuparambu Range						
65.	Ayyankunnumala	Aralam	U.S	Tellicherry Cannanore	320.00	Coconut, Rubber, Pepper, Cardamom, Banana and Tapioca
66	A.K. Forests	- do -	- do -	- do -	1,800.00	- do -
67.	A.K. Forests (Upper circuit) Kottiyoor (Ambayathodumala, Vellunnimala, Palukachimala, Venkilat Chapamala Venkilatmala Pottanthodimala Kadayangodmala Palchuramala)	- do -	- do -	- do -	100.00	Coconut, Rubber, Pepper Exclusively for Tribals
68.	Rajamala Ottapilamala	Kappad	- do -	- do -	828.00	Good tree growth, Cardamom, Pepper, Coconut and Cashew.
69	Poongottukavu	Kolari	61	- do -	13.00	Good tree growth, Coconut and Pepper
70	Tholambra	Tholambra	1/1	- do -	16.00	Coconut and pepper
71	Poilmuramala Vazhamala	Threpringattoor	275/1	- do -	51.00	Good soil – Coconut and pepper
	<i>Total for Kottuparamba Range</i>				3,128.00	
Manantoddy Range						
72	Periapeak Estate	Peria	248/3 AIB	N. Wynad Cannanore	10.00	Coffee, Pepper and Tapioca
73	Valia Kappalimala	- do -	47	- do -	27.00	Coffee and Pepper
74	Paniyathukunnu Cheriakappalimala	- do -	49	- do -	24.00	Pepper and Tapioca
75	Cheriyamangotmala Valiakunnu	- do -	87/IAI	- do -	10.00	- do -
76	Glanleven Estate	- do -	176/2 AIA	- do -	62.00	- do -
77	Cheriyakuzhikunnu	- do -	338/2A IAIF	- do -	40.00	- do -
78	Mangalamala	Peria	89/IA	N. Wynad Cannanore	20.00	Cardamom and Tapioca
79	Paniyankuzhimala Nedungadimala (3 item)	- do -	64/2A	- do -	48.00	- do -
80	Achilamkunnu	- do -	21	- do -	16.00	Coffee and Pepper, Banana and Tapioca as annual crop
81	Vengaramkunnu Kavumkunnu Perincherimala	- do -	80/IA	- do -	40.00	- do -
82	Mottankunnu Cheenikunnu	- do -	35/1	- do -	8.00	Coffee, Cocoa, Tapioca as annual crop.
83	Kappumkunnu Thrikkettukunnu	- do -	201/3	- do -	14.00	- do -
84	Akamcholamala Cheriakottakunnu etc.	- do -	76/A1	- do -	16.00	Coffee and Pepper with Tapioca as subsistence crop
85	Kavumkunnu	- do -	65/1A1	- do -	10.00	- do -

Sl. No.	Name and locality	Village	Survey No.	Taluk and District	Area (in Ha.)	Crop Pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Kolamottankunnu					
87.	Chirakkara Tavinhal Estate	Tavinhal	337, 338, 61	- do -	91.38	To be assigned exclusively for Tribals under a special Scheme*
(*) Approved at the IV th meeting of the Vested Forests Committee for assignment						
88	Chirakkara Tavinhal Estate	- do -	340/2A	- do -	12.00	- do -
89	Gounder and Company	- do -	65/IB, 68/9A	- do -	96.00 40.00	- do -
90	Kinikilal Devaswom	- do -	240, 253, 374/Part	- do -	95.64	- do -
91	Valli Alikutty Haji	- do -	374 (Part)	- do -	20.00	- do -
92	Kinikilal Bhagavathy Devaswom	- do -	57/1	North Wynad	100.00	- do -
93	Chirakkara Thavinhal Estate	Tavinhal	48/1	North Wynad	46.58	Coffee and pepper with tapioca
94	M/s. Alston Company	- do -	340/2A	- do -	14.03	- do -
95	Illathumala Estate	Vemom	182/1, 2, 3, 4	- do -	50.00	Coffee, pepper, tapioca as annual crop
96	Panduranga Estate 3 (items)	Thirunelli	294, 353 to 354	- do -	110.88	Coffee and pepper with tapioca (*)
97	Cherakkarakunnu	- do -	88/IAI	- do -	49.10	Coffee, pepper, tapioca as annual crop (*)
98	Brahmagiri Estate	- do -	76	- do -	40.89	- do - (*)
99.	Kattikulam	- do -	454/5B	- do -	11.33	- do - (*)
100	Nagamana	- do -	453	- do -	8.65	- do - (*)
101	Nallornad	Nallornad	12/IAIA	- do -	13.32	Coffee, tapioca (+)
102	Changadam	Perunnannoor	671/IAI	- do -	8.15	Coffee to be grown with tapioca as subsistence
103	Thazhe Illathumkandy	Thondernad	42/IF	- do -	108.00	To be assigned exclusively for Tribals on individual basis; for coffee and pepper
104	Meethalveedumkunnu	- do -	110	- do -	7.50	- do -
105	Peradassery Elamala	- do -	164	- do -	60.00	- do -
106	Nidumalakunnu	-do-	166	- do -	30.00	- do -
107	Kodakunnu	- do -	283/IF	- do -	16.00	- do -
108	Kaliankunnu	- do -	506/2	- do -	10.00	- do -
109	Beathenkunnu	- do -	530/IA3	- do -	7.53	- do -
110	Mylattukuppukunnu	- do -	981/IC	- do -	10.00	- do -
111	Chalamalayil Achan Kottukunnu	- do -	1143	- do -	40.00	- do -
112	Thattarmala	- do -	199	- do -	40.00	- do -
113	Bhagavathikam Devaswam	- do -	677/1	- do -	16.00	- do -
114	Vysian Ahmad and others	- do -	127	- do -	4.00	- do -
115	Koorankunnu	- do -	R.S. 167/1	N. Wynad Cannanore	40.00	- do -
116	Bhagavathikavu - Devaswom K.P.Krishnan Nair and others	Thondernad	1123	N. Wynad Cannanore	7.00	- do -

Sl. No.	Name and locality	Village	Survey No.	Taluk and District	Area (in Ha.)	Crop Pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
117	Thandar Narayanan Nambiar and others	- do -	1150	- do -	3.00	- do -
118	Padayan Ibrahim kutty's Forests	- do -	1154	- do -	2.75	- do -
119	K.P. Krishnan Nair's Forests	- do -	1156, 1169 1170/B	- do -	10.00	- do -
120	Jabeey's Forests	- do -	1163/1, 2, 3	- do -	8.00	- do -
(*) Exclusively for tribals						
(+) Approved for assignment at the 1 st meeting of the Vested Forests Committee						
21	Komby Ammad Forest	- do -	1167	- do -	6.75	- do -
122	Aruvalikunnu, Neelamala, Peruncholakunnu	- do -	238/1, 238/2B, 26	- do -	45.71	- do -
123	Nirmalagiri Estate	Thondernad	1148, 1149, 880, 1153	- do -	45.30 38.70	For assignment by lease exclusively for Tribals
124	Pikkakkil Kunhiraman Nair and others	- do -	1158	- do -	60.00	- do -
125	Vellachal Katheeya and others	- do -	1099	- do -	28.00	- do -
	- do -	- do -	1104	- do -	16.00	- do -
Total for Manantody Range					1813.19	

Total area for assignment in Tellicherry Special Division

Taliparamba Range	:	2146.66
Koothuparamba Range	:	3128.00
Manantoddy Range	:	<u>1813.19</u>
Total	:	<u>7087.85</u>

**Areas recommended for permanent reservation
KOZHIKODE SPECIAL DIVISION**

Sl. No.	Name of forest	Village	Area (in Ha.)	Reasons for suggesting permanent reservation					Special reasons
				Moisture conservation	Major Project	Soil Conservation	Suitability of forests		
1	2	3	4	5	6	7	8	9	
Kuttiady Range									
1	Poothenparamala, Puthenpeedik Kodappadi, Edathan kunnu and Valarmala R.S. 6/1	Kavilum - para Badagara Taluk	800.00	Escarpment of the Wynad Plateau. Essential for ensuring proper rainfall	Nil	Very steep highly vulnerable to soil erosion. Unfit for cultivation	Protection forests		
2	Kavunginkuzhimala, Vattiparamala and Chemmancherimala R.S. 175	- do -	1200.00	- do -	Nil	- do -	- do -		
3	Pulikkan	- do -	1000.00	On the steep escarpment of North Wynad and essential to promote rainfall	Kuttiady Project	Very steep, unfit for agriculture	Suitable for Scientific forestry	Adjoins Panoth Reserve of Kannothe Range	
4	Chudupulan	Perambra Quilandy	1000.00	- do -	- do -	- do -	- do -	- do -	
5	Pozhuthana forests containing combian Athiode, Kallanode, Olathooky Arialakkan (Kalpudian) Thirumudian	Perambra Quilandy	5000.00	Being the catchment area of Kuttiady Project, requires preservation of forests for the sustained yield	Kuttiady Project	Being the catchment area of dam it requires complete soil protection. Hence unfit for cultivation	Protection forest	---	
6	Karinganni (U.S)	Kayanna Quilandy	1500.00	- do -	- do -	- do -	- do -	Adjoins Panoth Reserve of Kannothe Range	
Total for Kuttiady Range			10500.00						
Kalpetta Range									
7	Bhagyalakshmi R.S. 683	Thariode	120.00	Heavy rainfall area and retention of forest cover necessary for regular monsoon	Banasura Sagar Project	The area is steep; clearance will accelerate soil wash and hence unfit for cultivation	Protection forest	Adjoins Lady smith Reserve Forest	

Sl. No.	Name of forest	Village	Area (in Ha.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Project	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
8	Choorani R.S. 680	- do -	40.00	- do -	- do -	- do -	- do -	- do -
9	Kalamanthodi R.S. 688	- do -	20.00	- do -	- do -	- do -	- do -	- do -
10	Thandiode R.S. 682/1	- do -	80.00	- do -	- do -	- do -	- do -	- do -
11	Vettom R.S. 685/IA	- do -	212.00	- do -	- do -	- do -	- do -	- do -
12	Thariode Estate R.S. 686/1	- do -	120.00	- do -	Banasura Sagar Project and Kuttiady Augmentation Project	- do -	- do -	- do -
13	Perunthatta & C.R.Estate R.S. 689 & 690	- do -	80.00	- do -	- do -	- do -	- do -	- do -
14	Varampatta R.S. 54	Padinhathara	25.00	- do -	- do -	- do -	- do -	- do -
15	Kuttiyamvayal 173/AIA 278/IAIA 173/IAIA	- do -	1127.00	- do -	- do -	- do -	- do -	- do -
16	Cheeyambam R.S. 160/21 AIAI	Poothady	1200.00	The area is in the Wynad plateau where rainfall is sharply falling. It is essential that the area should be preserved for getting more rainfall.	Kabany Project	It is necessary to protect this area in order to safeguard existing cultivation in Pulpally and Poothadi villages.	Suitable for Scientific forestry	Adjoins Pavagadda and Kuppadi Reserve Forests
17	Pamba R.S. 160/2IAIAI	Poothady	960.00	- do -	Many streamlets support to feed the Kabani Projects	- do -	- do -	- do -
18	Pozhuthana Estate, Malayalam Plantation, R.S. 178, R.S. 176, 179 183/5A, 184/1, 185/1	Achooranam	1500.00	Catchment area of Thariode river and promotes regular rainfall	Banasura Sagar and augmentation canal of Kuttiady H.E. Project	Very steep, unfit for cultivation	Protection forest	Adjoins Thariode Reserve Forests
19	Kurichiarmala R.S. 175/IA IB							
20	Kallumala R.S. 119,120/1 and 177	Kottapady	229.00	- do -	- do -	- do -	- do -	- do -
21	Chulika Malavaram, R.S. 262/2 and 264, 265/1	Kottapady	506.00	Steep area	Nil	Steep slopes unfit for cultivation	- do -	- do -

Sl. No.	Name of forest	Village	Area (in Ha.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Project	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
22	Muppainad Malayalam Plantations and Nilambur Kovilakam areas R.S.1169,1226, 1135/2, 1110/5 AIAIC 1110/5A, A1D, 1132/2 A1/B2, AI, 1158 and 929/2A	Muppainad	2560.00	Steep area. It forms an edge of the Wynad plateau. Critical for maintaining rainfall and hence dense tree growth should be protected	Chaliar Project	Steep slopes unfit for cultivation. Being the edge of the Wynad plateau erosion should be prevented at all costs by retaining dense tree growth	Protection forests	Forming an edge of the Wynad plateau, it requires special protection on both for the plateau as well as for the Nilambur Valley down below.

Total for Kalpetta Range 8779.00

Thamarassery Range

23	Ponnamkayam (U.S)	Thiruvambady	648.00	The areas are on the western slope of the Western Ghat. It is essential to retain these areas for the regulation of rainfall.	---	These areas are very steep and soil protection will be costly. Moreover the streamlets on the lower regions will get silted. Unsuitable for cultivation		The areas are on the Western Ghats through which the important trunk roads are formed. If the forests are cleared it may lead to land slips, cutting communication with South Wynad plateau, and endangering villages and cultivation in developed lands lower down
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Sl. No.	Name of forest	Village	Area (in Ha.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Project	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
24	Kaniat Malavaram (U.S)	- do -	2000.00	- do -	--	- do -	- do -	- do -
25	Kadathi Malavaram (U.S)	- do -	200.00	- do -	---	- do -	- do -	- do -
26	Pattermedu Velliara Vellathipilavu Malavaram R.S. 1/1	Puduppady	1200.00	- do -	---	- do -	- do -	- do -
27	Ghat Section Teak Plantation Elikode	- do -	25.00	- do -	---	- do -	- do -	- do -
28.	Pullikode Malavaram R.S.15/1	Kodencherry	1366.00	- do -	---	- do -	- do -	- do -
29	Mannilidam Malavaram (U.S)	- do -	120.00	- do -	---	- do -	- do -	- do -
30.	Koovala Malavaram (U.S)	- do -	720.00	- do -	---	- do -	- do -	- do -
31	Perooli Malavaram (U.S)	- do -	1320.00	- do -	---	- do -	- do -	- do -
32	Kanalad (U.S)	- do -	2800.00	- do -	---	- do -	- do -	- do -
33.	Paniankara Malavaram (Kolamavu)	Kidavoor	400.00	- do -	---	- do -	- do -	- do -
Total for Thamarassery Range			10799.00					

Kuttiadi Range	:	10500.00	hectares
Kalpetta Range	:	8779.00	''
Thamarassery Range	:	<u>10799.00</u>	''
Total for Kozhikode Division	:	<u>30078.00</u>	''

**List of areas proposed for assignment
Kozhikode Special Division**

Sl. No.	Name of Forests	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Kuttiady Range						
34	Karimunda Mala	Naripetta	159/1A1	Badagara, Kozhikode	200.00	Coconut with Cocoa
35	Valiyapulianpara	do.	159/1A1	do.	200.00	do.
36	Kumbalachola	do.	159/1A1	do.	12.00	do.
37	Vilangad Mala	Velliode	U.S.	do.	20.00	do.
38	Valiya Choorani and Cheriya Choorani and Villumalakunnu	Kavilumpara	5/5A2	do.	200.00	do.
39	Nallathanneermala Perakkathottam	do	5/5A2	do.	20.00	do.
40	Vellumalakunnu	do.	163	do.	22.50	do.
41	Poothanparamala	do.	6/1	do.	36.57	do.
42	Karungadumala	Naripatta	159/1A1	do.	12.00	do.
43	Poolappara	Kavilumpara	175	do.	15.00	do.
44	Chembinchira Mala, Puthanpeedika, Kodappadimala, Edathankunnumala, Kavunginkeezhumala, Valarmala, Mulakuthottam mala, Vattippanamala	do.	175	do.	1000.00	do.
45	Karimundamala	do.	5/5A2 pt	do.	200.00	do.
46	Pambamkodumala	Maruthomkara	U.S.	do.	100.00	do.
47	Kaipamala	do.	U.S.	do.	40.00	do.
48	Kuttiadi Estate	do.	90/1A	do.	140.00	do.
49	Janakikadu	do.	33/2A	do.	145.00	do.
50	Pangode	do.	U.S.	do.	10.62	do.
51	Kongadumala	do.	U.S.	do	10.62	do.
52	Kilikudukki, Manicheri	Kayanna	U.S.	Quilandy Kozhikode	220.00	Coconut with Cocoa as intercrop
53	Kakkayam	do	U.S.	do.	10.00	do.
54	Pakkath-Villary Chudupullam	Perambra	U.S.	do.	480.00	Coconut, Pepper, Cocoa
55	Karampara, Karingani	Poozhithode	U.S.	do.	400.00	
					3494.31	
Kalpetta Range						
56	Elikkal	Thariode	679	S.Wynad Kozhikode	55.00	Cardamom existing tree growth to be protected (*)
57	Bhagyalakshmi	do.	683	do.	145.00	do. (*)
58	Thandiyode	do.	682/1	do.	100.00	do. (*)

Sl. No.	Name of Forests	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
59	Karunganni	do.	684/1 and 684/2	do.	100.00	do. (*)
60	Thariode Malavaram	do.	686/1	do.	200.00	do. (*)
61	Perumthatta	do.	689, 699	do.	500.00	do. (*)
62	C.R.Estate	do.	690	do.	35.00	do. (*)
63	Kalamanthode	do.	688	do.	100.00	do. (*)
64	Vattam	do.	685/1A	do.	200.00	Coffee, Pepper and Cocoa
65	Varampatta	Padinharethara	54	do.	100.00	Exclusively for Tribals, Coffee, Cocoa and Tapioca
66	Muttil	Muttil	956/IED	do.	4.12	Coffee, Rubber (included in the list for assignment approved by the Vested Forests Committee at the IV Meeting)
67	Muttil peak	Muttil	969/1A	S.Wynad Kozhikode	80.00	For a composite colonisation scheme for Tribals under a Joint Farming Society. Survey Nos. 520/C Kottapady and 519/1A1A Kalpetta (191.00 hect.) already included in the areas for assignment.
68	Woodland Estate	Kalpetta	519/1A1A	do.	80.00	
69	Chembra Peak	do.	658, 659	do.	116.24	
70	Kottaram Plantation	do.	520/1C	do.	190.00	
		Kottapady	83/1C	do.	268.00	
		do.	90/1, 2			
71	Thrikaipetta Malavaram	do.	216, 217/2	do.	405.00	Coffee, Pepper, Cocoa
(*) Exclusively for Tribals						
72	Chulika	do.	262/2, 265/1, 264	do.	200.00	do.
73	Chembra Peak	do.	205/11A1	do.	188.10	Exclusively for assignment by lease for Tribals (*)
74	Chembra Peak	do.	97/1B1	do.	105.85	do.
75	Chembra Peak	do.	249/1	do.	300.00	
76	Kottanad	do.	214/8A1, 243/7	do.	27.74	Coffee, Pepper, Cocoa (*)
77	Kottanad	do.	243/7A1	do.	24.57	do. (*)
78	Kottanad	do.	178/2	do.	8.70	do. (*)
79	Jaihind	do.	219/D3	do.	40.00	do. (*)
80	Malayalam Plantations	do.	188/3A1	do.	80.00	Exclusively for Tribals
81	Malayalam Plantations	do.	204/1A1	do.	16.21	do.
82	Malayalam Plantations	do.	247/4, 248	do.	378.00	do. (*)
83	Malayalam Plantations	do.	251/5	do.	74.85	do.
84	Madakkimala Forest	Kottathara	1059	do.	43.00	Coffee & Cocoa (*)

Sl. No.	Name of Forests	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
85	Sethukunnu	Achoor	124	do.	150.00	do.
86	Idiyamvayal	do.	1/1B	do.	39.00	do.
87	Ambazha Estate Malayalam Plantations	do.	175, 176, 177, 183 to 185	do.	1500.00	Exclusively for Tribals. Coffee, paddy, pepper
88	Malayalam Plantations	Kunnathidav aka	2/4, 340/3	do.	80.00	Exclusively for the proposed Dairy Colony for Tribals.
89	Pookkottumala	do.	180 to 184, 303/1	do.	200.00	do.
90	Pookkottumalavaram and Eagle Estate	do.	285/4A, 304/1A1	do.	50.00	do.
91	Aramala	do.	326/1B2	do.	26.25	do. (*)
92	Rabiana	do.	329/4C2, 4C4	do.	35.20	Dairy project for Tribals
93	Arunagiri	do.	329/4C1B	do.	161.12	do. (*)
94	Charity	do.	338	do.	80.00	Coffee, Pepper, Cocoa
95	Thalamala	do.	341/1 339/4C1A1, 339/4A1A	do.	346.00	do.
96	C.C. Mukku	Purakkady	117/1A1A	do.	91.75	Coffee, Pepper, Cocoa (0\$), Flat lands. Exclusively for Tribals
97	Purakkady Devaswam	do.	117/1A1A	do.	22.00	
98	Rippon Estate (Co-operative Society Tea Society Meppady)	Muppainad	1022/3, 1132/2A1A, 1137/1	do.	400.00	Exclusively for Tribals
99	Malayalam Plantation, Nedumkarana	do.	1132	do.	80.00	do.
100	Do. Tenamaram	do.	..	do.	120.00	do.
101	Chulika	do.	1141, 1138, 1157, 1158, 1179, 1140, 1189, 1220, 1221, 1222, 1224	do.	100.00	do.
102	Vakeri	Poothadi	R.S.160/21A 1A1	S.Wynad Kozhikod	80.00	To be assigned on lease exclusively for Tribals (Teak Plantations)

Sl. No.	Name of Forests	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
103	Beenachi Estate (M.P. Government)	S. Batteri	354/1 & 2	do.	220.00	Under references to Government on status of V.F.O.S. 10/60 pending in the Sub Court, Calicut. If it is ultimately decided that it is a vested forest, then exclusively for assignment to Tribals for cultivation of coffee, and plantation species

7946.70

(*) Included in the list of areas for assignment approved by the Fourth Meeting of Vested Forests Committee

(°\$) Already approved for assignment at the First Meeting of the Vested Forests Committee

Thamarassery Range

104	Pullanimedu	Puthuppady	R.S.72	Kozhikode Kozhikode Dist.	75.00	Rubber and Cashew (scheme prepared – Annexure III B)
105	Velliyara, A.M.E.	do.	R.S. 1/1	do.	30.00	Rubber, Coconut, pepper with Cocoa intercrop
106	Velliyara, Karikkulam bit I A	do.	R.S. 1/1	do.	20.00	do.
107	Do. Kakkavayal	do.	R.S. 2	do.	125.00	do.
108	Do. Kakkavayal II	do.	R.S. 2	do.	8.25	do.
109	Mylalampara	do.	R.S. 1/1	do.	4.00	do.
110	Villiyaramalavaram Karikulam II	do.	R.S. 1/1	do.	18.00	Coconut, Cashew, Tapioca
111	Vellathipilavu Malavaram Manalvayal Teak Plantations	do.	R.S. 1/1	do.	1.00	Coconut
112	Vellathipilavu Pattermedumalavaram	do.	R.S. 1/1	do.	50.00	Coconut, Rubber, Cashew
113	Pathikos Teak Plantations	do.	R.S. 1/1	do.	4.00	do.
114	Paniyamkara Malavaram – Payona	Kedavur	R.S.2	do.	29.00	Rubber, Pepper, Coconut with Cocoa as intercrop
115	Do. Manamel	do.	R.S. 2	do.	16.00	do.
116	Do. Chammel	do.	R.S. 1	do.	184.00	Rubber, Coconut, Cashew
117	Panmankara Malavaram, Chamal	do.	R.S. 2	do.	10.00	do.
118	Poonoor Block I	Raroth	R.S. 2	do.	8.25	Coconut, Cashew and tapioca

Sl. No.	Name of Forests	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
119	Poonoor Block II	do.		do.	13.00	do.
120	Elikodu Pulikode Manniladam, Vattachira	Kodenchery	R.S. 15/1	do.	52.00	do.
121	Koovala Malavaram II Jeerakapara	do.	do.	do.	9.25	do.
	Do. III	do.	do.			
122	Do. IV	do.	do.	do.	6.00	do.
123	Koovala Malavaram – I Jeerakapara Bit I	do.	R.S. 153	do.	15.00	do.
124	Maruthilavu Block	do.	15/1	do.	13.00	do.
125	Elikkode, Pulikkode Malavaram Chembukadavu Block	do.	R.S. 15	do.	5.00	do.
126	Kooval Malavaram	do.	R.S. 153	do.	520.00	Rubber, Coconut, Cashew, Tapioca
127	Peruli Malavaram	do.	160	do.	800.00	do.
128	Kanalad Malavaram Mundoor Block	do.	161, 162 and 163	do.	1000.00	do.
129	Paikkadu Malavaram	Kumaranellur	R.S.83 pt	Kozhikode Kozhikode Dist.	100.00	Rubber, Coconut, Cashew, Tapioca
130	Maramchatty teak plantation I	do	do.	do.	1.30	Coconut, Tapioca
131	Adichuthariankunnu (Paikad)	do.	do.	do.	36.00	Rubber, Coconut, Cashew
132	Punariipoil	do.	R.S. 83	do.	2.50	Coconut
133	Kaniat Malavaram	Thiruvambady	U.S.	do.	400.00	Rubber, Coconut, Tapioca
134	Pannikode Chundathampoil teak plantation	Kodiyathur	R..S. 182/2	do.	1.70	Coconut, Tapioca
Total for Thamarassery Range					3557.25	

Total area for assignment in Kozhikode Special Division

	Hectares
Kuttiady Range ..	3357.25
Kalpetta Range ..	7946.70
Thamarassery Range ..	3557.25
	14861.20

Areas in Vested Forests for Permanent Reservation Nilambur Special Division

Sl. No.	Name of forest	Village	Area (in Hect.)	Moisture conservation	Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
Chungathara Range								
1	Gwalior Rayons Forests R.S. 1510, 1547 of Edakkara, 1350, 1353 P & 1305 D of Chungathara	Edakkara and Chungathara	7208.00	The area forms the catchment of the Pandiyar, Punnapuzha, Cholati and Chaliyar streams, tributaries of the Chaliyar river. Heavy rainfall area, the forest cover contributing to convection rains in addition to the regular monsoons.	The Pandiyar Punnapuzha Hydro - Electric Project. The Cholati - Chaliyar Project under investigation	The area covers steep slopes which are vulnerable to erosion. Conventional methods of soil protection will be costly.	The conditions are suitable for scientific forestry	Forms the State boundary with Tamil Nadu
2	Nilambur Kovilakam Forests	Nilambur Edakkara	7674.00				do.	do.
3	Punchakolli Malavaram	Edakkara	3200.00		do.	Forest cover to be retained	do.	do.
4	Madhuvanam Estate (U.S.)	do.	168.00	This lies on the upper reaches of Western Ghats with evergreen type of forests. This is also an area subject to heavy rainfall.	Nil	Very steep and unfit for cultivation	Protection forests	do.
Total for Chungathara Range			18250.00					
Edavanna Range								
5.	Manjeri Kovilkam Forest. (U.S of Nilambur & R.S 1 of Mampad Villages)	Nilambur Mampad	3070.00	This area is a catchment area for many tributaries of Chaliyar river	Nil	Very steep and unfit for cultivation	The lower portion of the Forest can be converted to Teak Plantation and the rest as protection forests.	----
6.	Nedumchery Malavaram R.S.1 and 51	Mampad	1290.00	do.	Nil	do.	Protection Forest	
Total for Edavanna Range			4360.00					

Sl. No.	Name of forest	Village	Area (in Hect.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
Kalikavu Range								
7.	Puzhuthutti Malavaram (U.S.)	Amarambalam	838.00	The area form catchment area for many streams which are tributaries to Chaliyar river	Nil	Heavily worked in the past and soil impoverished. Very steep and unsuitable for cultivation	The area can be regenerated with Teak, under natural conditions and fertility of the soil built up. Soil wash also has to be protected by the judicious management of afforestation	Adjoins New Amarambalam Reserve
8.	Chakkikuzhi Malavaram (U.S.)	do.	600.00		Nil	do.	do.	
9.	Vadakkkekottamala (U.S.)	do.	1688.00		Nil	do.	do.	
10.	Kozhipara Mala (U.S.)	Kalikavu	1440.00	The area forms catchment of many streams which are tributaries of Chaliyar River	Nil	Very steep, corded and unfit for cultivation	Protection forest	
11.	Pullancode	do.	320.00	do.	Nil	do.	do.	
12.	Nellikara, Erankole and Kottachakkodan Malavaram	do.	760.00	do.	Nil	do.	Suitable for Scientific forestry	These forests lies contiguous to the Silent Valley Reserve Forests of Palghat Division
Total for Kalikavu Range			5646.00					
Perintalmanna Range								
13.	Kannothe Malavaram	do.	1500.00	The area gets good rains. Is an evergreen forest. There are a number of streamlets running through the area.	Nil	do.	do.	Contiguous to the Silent Valley Reserve Forest
14.	Chenkote	do.	200.00	do.	Nil	do.	do.	do.
15.	Cherumba Malavaram (U.S.)	Karuvarakundu	160.00	do.	Nil	This lies contiguous to Kannothe Malavaram	..	..
Total for Perintalmanna			1860.00					

Total area for Permanent Reservation in Nilambur Division

		Hectares
Chungathara Range	..	18250.00
Edavanna Range	..	4360.00
Kalikavu Range	..	5646.00
Perintalmanna	..	1860.00
		30116.00

**Areas in vested forest proposed for assignment
Nilambur Special Division**

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Chungathara Range						
16.	Gualior Rayons (Pothukal and Mulamthooki areas)	Edakkara Chungathara	R.S.1510, 1547 1360,1353 P, 1305	Ernad Taluk Malappuram do.	200.00	Coconut and pepper for the lower areas and cashew higher up hill and paddy and tapioca as annual crops.
17.	Nialmbur Kovilagam	Nilambur Edakkara	U.S.	do.	400.00	do. With sugarcane in suitable areas
18.	Koderi Forests	Chungathara	835, 842	do.	27.64	Fairly level land. Coconut and Sugar cane
19.	Koderi Forests	do.	819, 821, 828	do.	118.20	Sugar-cane
20.	Nelloil and Koderi Forests	do.	R.S.852 and 854	do.	112.96	Fairly level land. Coconut and Sugar-cane
Total for Chungathara Range					858.80	
Edavanna Range						
21.	Mankada Kovilakam	Nilambur	U.S.	do.	27.08	Sugar-cane
22.	Athikal Forest Bit I	do.	U.S.	do.	25.84	do.
23.	Do. Bit – II	do.	R.S. 90	do.	10.80	Coconut, Cashew
24.	Do. Bit III	do.		do.	50.80	Sugar-cane
25.	Manjeri Kovilakam	do. Mampad	U.S. R.S. 1	do.	345.00	Exclusively for Tribals Coconut, Cashew and Survival crops.
26.	Urangattiri	Urangattiri	R.S. 3/1, 6/1 and 8/1	do.	1746.00	Coconut in the lower parts and cashew in the rest of the areas
27.	Chekkunnumala (Alias Perakamanna)	Urungattiri and Perakamanna	486 1 and 2	do.	360.00	do.
28.	Karukamanna Malavaram	Mampad	U.S.	do.	40.00	Coconut and Cashew
29.	Kolappad Mala	do.	U.S.	do.	140.00	do.
30.	Talipoyil	do.	R.S.145	do.	8.15	do.
Total for Edavanna Range					2753.67	
Kalikavu Range						
31.	Orikuttiyan Mala	Kalikavu Amaram-balam	U.S.	do.	34.30	Coconut and Cashew
Total for Kalikavu Range					34.30	

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Perinthalmanna Range						
32.	Thekkenmala and Anamala	Vettathur-I	R.S.488	Perunthalmanna Malappuram	20.00	Coconut & Cashew, tapioca
33.	Unikkalimala (Mannarmala)	do.	R.S. 1/1A2	do.	197.40	do.
34.	Arakkaparamba	Thazhekodde	R.S.1/2	do.	40.00	do.
35.	Amminicad	do.	R.S.26	do.	40.00	do.
36.	Kumaragiri Estate	Mankada	R.S. 64/1	do.	120.00	Coconut, Rubber and Cashew
37.	Pachini	Panchini Vettathur	R.S. 48/7	do.	4.80	Coconut and Cashew
Total for Perinthalmanna Range					422.20	

* Areas proposed exclusively for sugar-cane

Chungathara Range

38.	Gwalior Rayons Forests	Edakkara and Chungathara	1510, 1547, 1350, 1353, Part 1305	Ernad Malappuram	4160.00	Sugar-cane
39.	Nilambur Kovilakam Forests	Nilambur Edakara	U.S.	do.	1928.00	do.
Total for Chungathara Range					6088.00	

Edavanna Range

40.	Manjeri Kovilakam	Nilambur Mampad	U.S.	Ernad Malappuram	456.00	Sugar-cane
Total for Edavanna Range					456.00	

Kalikavu Range

41.	Puzhuthatti (Part)	Kalikavu	U.S.	Ernad Malappuram	200.00	
42.	Eramkole	do.	U.S.	do.	240.00	
Total for Kalikavu Range					440.00	

Total area for assignment in Nilambur Special Division

			<u>Hectares</u>
Chungathara Range	..	858.80 + 6088.00	= 6946.80
Edavanna Range	..	2753.67 + 456.00	= 3209.67
Kalikavu Range	..	34.30 + 440.00	= 474.30
Perinthalmanna Range	..	422.20 + ..	= 422.20
Total	..		= 11052.97

* The State Farming Corporation of Kerala Ltd., has requested the Government to allot these areas for sugar-cane cultivation by them.

**Areas in Vested Forests for Permanent Reservation
PALGHAT SPECIAL DIVISION**

Sl. No.	Name of forest	Village	Area (in Hect.)	Reasons for suggesting permanent reservation					Special reasons
				Moisture conservation	Major Projects	Soil Conservation	Suitability of forests		
1	2	3	4	5	6	7	8	9	
Thenkara Range – Mannarghat Taluk									
1	Tathengulam Malavaram R.S.185/1	Arakurussi	830.00	Heavy rainfall area	Power House and tail race of the Silent Valley Project	Rocky over the major portions and too steep in the rest. unfit for cultivation	Protection Forests	..	
2.	Paruthimala (U.S.)	Agali	400.00	do.	do.	do.	do.	..	
3.	Mozhukumpara Malavaram (U.S.)	do.	1051.00	The forest cover and peaks contribute to rainfall and forms a catchment boundary along the ridge of the hills	do.	do.	do.	..	
4.	Anamooli Malavaram (U.S.)	do.	188.00	do.	do.	do.	do.	..	
5.	Urulankunnu Malavaram (U.S.)	do.	260.00	do.	do.	do.	do.	..	
6.	Kalladikodan Malavaram (U.S.)	do.	1940.00	The forest covers and the peaks contribute rainfall in adjoining areas.	Nil	do.	do.	..	
7.	Karimba Malavaram (U.S.)	do.	40.00	Certain streams from the area flow to Thuppanad river. Forms a part of the 'rainfall boundary' in the Palghat gap	do.	do.	do.	..	
8.	Meenvallom (U.S.)	do.	200.00		do.	do.	do.	..	
9.	Carimala (U.S.)	do.	600.00		do.	do.	do.	..	
10.	Chullippara (U.S.)	do.	40.00		do.	do.	do.	..	
11.	Mundanad (U.S.)	do.	2400.00		do.	do.	do.	..	
12.	Vakkodan	do.	200.00	do.	Kanjirapuzha Project	do.	do.	..	

Sl. No.	Name of forest	Village	Area (in Hect.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
13.	Vettilachola (U.S.)	do.	800.00	do.	do.	do.	do.	..
14.	Anakkaranam (U.S.)	do.	200.00	One end of the Kanhirapuzha dam touches the malavaram	do.	do.	do.	..
15.	Kundanatty (U.S.)	do.	60.00	..	do.	do.	do.	..
16.	Koonal (U.S.)	do.	160.00	..	do.	do.	do.	..
17.	Kelaloor Malavaram R.S.235/1A2	Kottapadam	560.00	..	do.	do.	do.	..
18.	Pothoppadam R.S. 51/C, D.G.11A B.A. and 1B	Kottapadam III	680.00	Heavy rainfall area. Forest cover and the peaks contribute rainfall in adjoining areas also	----	do.	do.	..
19.	Karappadam R.S. 1/1A, 9/1A2A, 133/4A, 134/1 and 3	Kumaramputhur	323.00	..	do.	do.	do.	..
Total for Thenkara Range			10932.00					
Agali Range (Mannarghat Taluk)								
20.	Mukkali Vangamala R.S.1957, 1958 and 23	Agali	1200.00	Area forms the catchment boundary between Bhavani and its tributaries and Kuttiarpuza tributaries	Silent Valley, Panthanthodu and Kerala Bhavani Project	The areas cover steep slopes and are vulnerable to erosion. Conventional method of soil protection will be costly.	Limited forestry operations under strict supervision can be tried	Tribal area. Special consideration necessary
21.	(delete)							
22.	Kallamala Malavaram 1841/P	do.	100.00					
23.	(delete)			Heavy rainfall area. The forest cover contributing to		Unfit for cultivation. Necessary to maintain		
24.	(delete)							

Sl. No.	Name of forest	Village	Area (in Hect.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
25.	(delete)			convection rain in addition to regular monsoon.		yield in the Siruvani Catchment		
26.	Thoova	Sholayur (Along the state boundary of Tamil Nadu)	770.00	do.	do.	do.	do.	do.
27.	Aralikonam I, 761, 469, 268	Pudur	7994.00	do.	do.	do.	do.	do.
28.	Kinnakkara 1132, 41130	do.	40.00	do.	do.	do.	do.	do.
Total for Agali Range			10104.00					
Palghat Range (Palghat Taluk)								
29.	Oduvangad Forest 1, 2, 16, 49, 51, 52, 54, 113, 114, 289, 282 to 284, 57, 59 and 46	Mundur II (Pudupariaram)	108.85	Forms part of the northern lip of the Palghat gap	do.	Very steep and rocky, unfit for cultivation	To be retained as protection forest	..
30.	Kadukkankunnu Forests R.S.852, 853, 854, 157 and 372	Malampuzha	360.00	Area forms catchment of Malampuzha Project	Malampuzha Project	Mostly rocky and steep. Cultivation will cause silting up of the Reservoir	To be protected with special care	..
Agali Range (Mannarghat Taluk)								
20.	Mukkali Vangamala R.S.1957, 1958 and 23	Agali	1200.00	Area forms the catchment boundary between Bhavani and its tributaries and Kuttarpuzha tributaries and Kuttarpuzha tributaries.	Silent Valley, Panthanthodu and Kerala Bhavani Project	The areas cover steep slopes and are vulnerable to erosion. Conventional method of soil protection will be costly.	Limited forestry operations under strict supervision can be tried	Tribal area. Special consideration necessary
21.	(delete)							
22.	Kallamala Malavaram 1841/P	do.	100.00					

Sl. No	Name of forest	Village	Area (in Hect.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
23.	(delete)			Heavy rainfall area. The forest cover contributing to convection rain in addition to regular monsoon.		Unfit for cultivation. Necessary to maintain yield in the Siruvani Catchment		
24.	(delete)							
25.	(delete)							
26.	Thoova	Sholayur (Along the state boundary of Tamil Nadu)	770.00		do.			do.	do.
27.	Aralikonam I, 761, 469, 268	Pudur	7994.00	do.	do.	do.	do.	do.
28.	Kinnakkara 1132, 41130	do.	40.00	do.	do.	do.	do.	do.
Total for Agali Range			10104.00					
Palghat Range (Palghat Taluk)								
29.	Oduvangad Forest 1, 2, 16, 49, 51, 52, 54, 113, 114, 289, 282 to 284, 57, 59 and 46	Mundur II (Pudupariaram)	108.85	Forms part of the northern lip of the Palghat gap	do.	Very steep and rocky, unfit for cultivation	To be retained as protection forest	..
30.	Kadukkankunnu Forests R.S.852, 853, 854, 157 and 372	Malampuzha	360.00	Area forms catchment of Malampuzha Project	Malampuzha Project	Mostly rocky and steep. Cultivation will cause silting up of the Reservoir	To be protected with special care	..
31.	Emoor Bhagavathy Forest 874	do.	6928.00	Most of the streams feeding straight into the Malampuzha Reservoir originate here. Disturbance of tree cover will accelerate silting and reduce precipitation and run-off.	do.	do.	do.	..

Sl. No	Name of forest	Village	Area (in Hect.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
32.	Akathethara R.S.1/8A1A1	Akathethara	100.00	Should be preserved for the protection of rainfall "boundary" in the Palghat gap. It is necessary to provide a wind break against the hot de-hydrating wind from the Coimbatore areas and to prevent the escape of rain bearing clouds during the south-west monsoon through the gap.	..	Too steep and rocky for cultivation	Suitable for scientific forestry	..
33.	Vadassery Forest (U.S.)	Pudussery Central	4091.00	These areas form the northern edge of the Palghat gap where forests are critically needed for safeguarding rainfall and climate. A large number of streams, the headwaters of the Bharathapuzha river system originate here.	Malampuzha and Walayar Projects	Exposed sheet rock over considerable portion. The rest very steep with loose soil. Unfit for cultivation	Careful working under scientific management to sustain and improve the forests is possible and necessary	..
34.	Nellisery Forest R.S.639	do.	95.00		..	..	..	..
Total for Palghat Range			11628.85					

Sl. No	Name of forest	Village	Area (in Hect.)	Reasons for suggesting permanent reservation				
				Moisture conservation	Major Projects	Soil Conservation	Suitability of forests	Special reasons
1	2	3	4	5	6	7	8	9
Nemmara Range								
35.	Venganad Kovilakam Forest Akamalavaram and Puramalavaram	Muthalamada Chittoor Taluk	5820.00	The area forms the southern wall of the Palghat gap. Forest cover here is essential to protect the district from hot dehydrating wind from the east and to retain rain bearing clouds during the south-west monsoon	The area forms the catchment of the proposed Karappara – Kariarkutty Project. A number of projects including the Peringalkuthu R.B.Scheme are proposed on Chalakudy river into which the Parambikulam river falls. Thekkady river which is a tributary of Parambikulam river flow through this area	Soils unfit for cultivation. Too steep	Natural regeneration on the slopes and Teak Plantations in the Plateau and Valleys will be successful	The area lies along the left bank of the Thekkady river. Thekkady R.F. of Sungam range is adjacent and has now been included in the Parambikulam Wild Life Sanctuary
36.	Nellikkalidam	Kizhakkencherry and Vandazhy (Alathur Taluk)	1000.00	do.	Forms the catchment of Mangalam project	Steep slopes highly vulnerable to soil erosion. Unfit for cultivation	do.	Wildlife, particularly elephants occur in the area. Adjoins reserve forest in Nemmara and Trichur Forest Division
37.	Puzhakkalidam	Kizhakkancherry (Alathur Taluk)	2120.00	On the western aspect of the southern wall of the Palghat gap. Plays a vital role in retaining rain bearing clouds during south-west monsoon.	Forms the catchment of and surrounds the Mangalam Reservoir	The forest cover left uncleared is along the ridges between Palghat and Trichur Districts. Steep slopes and hence are vulnerable to erosion. Unfit for cultivation	Suitable for regeneration with teak. Evergreen patches should be left undisturbed.	The area forms catchments of Mangalam Reservoir. It is learnt that due to felling and breaking up soil for tapioca cultivation along the lower regions. The Mangalam reservoir has started silting rapidly. Adjoins R.F. in Trichur division.

Total area for permanent reservation in Palghat Division

	<u>Hectares</u>
Thenkara Range ..	10932.00
Agali Range ..	10104.00
Palghat Range ..	11628.85
Nemmara Range ..	8940.00
Total ..	41604.85

**Areas in vested forest proposed for assignment
Palghat Special Division**

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Thenkara Range						
38.	Thattenkulam	Arakurussi	185/1 part	Mannarghat Taluk Palghat District	200.00	Rubber and cashew with tapioca
39.	Pazhayakkadu	do.	..	do.	76.67	Coconut and cashew
40.	Ayyappanmala	Karakurissi	13, 156/15	do.	13.04	Coconut, fruit trees and cashew
41.	Kondakkamala	Pottasserri I & II	2, 9 to 11, 15, 16, 11, 208	do.	47.83	do.
42.	Paruthimala	Agali		do.	200.00	Rubber and Cashew with Tapioca
43.	Inchikunnu	do.	U.S.	do.	428.00	Exclusively for allotment to tribals, coconut, rubber, fruit trees and cashew, tapioca (*)
44.	Cheria Inchikunnu	do.	U.S.	do.	40.00	Rubber, Coconut, Cashew
45.	Mankada Malavaram	do.	..	do.	120.00	do.
46.	Neelamkadu alias Tadukappukunnu Bits I & II	Thanchanattukara	2, 3, 6, 8, 9, 344	do.	29.32	Coconut, tapioca and paddy
47.	Myladumkunnu	do.	3/1A, 2/2, A2	do	32.50	Coconut, Tapioca and Paddy
48.	Kolappadamala	Kumaramputtur	29/1A, 3 & 4/1A	do.	35.00	Cashew
49.	Maruthumkadu	do.	9/1A, 2A, 7A, 133/3, 4	do.	30.90	Coconut, tapioca and paddy
50.	Kellalur Malavaram	Kottapadam	235/A12	do.	1120.00	Rubber and cashew with tapioca
51.	Neelamkadparamba	Arakurussi	..	do.	4.00	No condition

(*) Scheme already prepared by the Collector, Palghat

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
52.	Cherattimala	Ambalappara land	1, 23 to 27 (Cherumunda ssery)	Ottapalam	56.63	Coconut, rubber, cashew, hill paddy and tapioca
		Kadampazhi puram I	1, 31, 376 to 379, 387 (Vengasseri) 136 to 140 (Kadampazhi puram)			
53.	Pattimalakunnu mala	Amabalapara II	22/3, 24/1, 28, 111 to 114, 1/5, 116, 117, 118, 124, 125, 130, 131, 139, 142 to 144	do.	162.65	Coconut and cashew
54.	Palamala	Kadampazhi puram I	90/1B, 2A1	do.	38.00	Coconut, rubber and cashew, tapioca and hill paddy as annuals
55.	Kavungalmala 2 bits	Ampalapara II	125 part, 139, 115, 118 etc.	do.	35.00	Coconut
56.	Velamkunnu	do.	14, 26, 30	do.	7.00	Coconut, cashew
57.	Anangamala	do.	103/13, 1/1, 6 to 9, 10, 364, 368, 78, 79, 166, 167	do.	1015.00	Rubber, Coconut and Cashew Tapioca and hill paddy
		Trikadiri Ottapalam	69/1 1/1, 1/2, 3, 4, 155, 22, 158, 24, 56, 168, 58, 59, & 170			
	Pavukonam Malavaram	Ananganadi	8 and 120			
		do. Chalavara	2/1A			
58.	Koonammala	Trikadiri Ambalapara II	34/19, 69/1, 136, 8 to 10	Ottapalam	478.28	Coconut and Cashew
59.	Malachikad alias Navakerala	Chalavara	78, 168, 226	do.	66.50	Coconut, rubber, pepper and cashew, Hill paddy and tapioca
60.	Randumalakkadu	do.	168/11A, 168/11 B1	do.	226.89	Coconut, rubber, fruit trees, cashew and forest species

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
61.	Parakulam	do.	187/2, 188/9, 78/7A, 178/10B, 53/1, 127/6, 7, 10, 168	do.	38.47	Coconut and cashew
62.	Chemparathimala Cholakkalkad	Cherpalasseri Nellaya Chalavara	85 to 88, 260, 138 to 143, 18, 23, 33, 35 to 38, 76, 78, 84, 85, 99, 100, 104, 139 and 141	do.	140.17	Coconut, Rubber and Pepper with Cashew, Banana and Paddy
63.	Veetikadanmala	Nellaya	26	do	13.64	Coconut, rubber and cashew. Tapioca and paddy
64.	Porothrakkad (2 bits)	Kulukallur	12, 32, 33, 34, 35	do.	73.42	Coconut and cashew
		Nellaya	1, 32, 35, 36, 42, 149, 166, 192			
65.	Kolapullikundu	Ongallur	R.S.36	do.	6.22	Cashew
66.	Nellikunnu	do.	93/1, 95, 97	do.	12.47	Coconut, cashew
67.	Kanamkunnu	do.	101/4	do.	9.50	Coconut and Cashew
68.	Thuprakunnu Bits I & II	do.	18/6, 10/16, 18/8, 19/3	do.	21.83	Coconut & tapioca
69.	Cheruvamkadu	do.	52/1A, 1B	do.	12.33	do.
70.	Ramagirikotta and Chavarankuzhikad, Kottapadi valanikunnu and Manakuzhi	Vallapuzha	2 to 10, 12, 13, 234/2, 4, 235/1, 2, 3, 4, 6 to 12	do.	185.00	Coconut and rubber and cashew, tapioca and paddy
		Koppam	150, 154, 201, 203, 235, 236			
		Ongallur	1, 35, 36, 40, 43			
71.	Chovallurmanakkad	do.	2, 6, 18 to 20, 47, 48, 76 to 80, 82, 83, 85	do.	69.57	Coconut and cashew and forest species
72.	Pozhiyamkunnukundu and Pilamattakunnu	do.	63, 84, 99, 102, 252, 253, 6/2, 3, 18, 19/2, 3	do.	32.44	Coconut and tapioca
73.	Karuvannur Manakad	do.	162/7, 166/2, 3, 167/6	do.	7.98	Cashew

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
74.	Andhimalankad	Ongalloor II	14 to 16, 208	do.	180.00	For sample scheme proposed. See Annexure III A
		Shoranur II	33, 34, 37, 38, 289, 290, 292, 293, 295, 297, 298			
		Shoranur I	233/1 to 4			
75.	Alampathuparamba (Andhimalankad Bit II)	Shoranur II	252, 254/4, 254/7, 8, 7B	do.	11.77	Coconut, rubber, tapioca, Modan paddy
76.	Chembootimala (Two Bits)	Karimpuzha II	157	do.	26.97	Pepper, coconut and cocoa. Tapioca, paddy and banana
77.	Myladumkunnu	do.	153, 6B	do.	6.56	do.
78.	Kozhikotanmala	do.	132/10	do.	10.98	Coconut, rubber and cashew. Hill paddy and tapioca as annual crop
79	Idumbanmala alias Pambramala (Bit II)	Karimpuzha II	41/2, 50	Ottappalam	22.92	Cashew, teak, tapioca and hill paddy
80	Pambramala (Bit I)	do.	50, 57	do.	100.00	do.
81	Kottayil Kadu	do.	198	do.	6.15	Coconut, Pepper and Tapioca
82	Mangatmala (Two bits)	do.	205	do.	11.38	Coconut, Pepper with suitable intercrops, Banana, Paddy and Tapioca as food crops
83	Kottamala	do.	R.S. 157 Part	do.	19.00	Coconut, Cashew
84	Kadathattumana (Kodanadu Mana)	Sreekrishna puram - I	68	do.	4.10	do.
85	Nilavilikunnu	do.	2/6, 2/7, 10	do.	10.24	Coconut, Tapioca
86	Marinkodamala	Sreekrishna puram, Kadampazhippuram	19,23,24, 83, 1 to 3, 77,81,83,195, 210,211	do.	33.94	Coconut, rubber and cashew, tapioca and hill paddy
87	Cherikaliparamba	do.	1,25,30, 35, 57	do.	19.44	Coconut and fruit trees
88	Kottakunnu	Sreekrishna puram – II	28,36	do.	35.64	do.
89	Kotharamankkad	Nagalaseri	229,293,316, 317, 322,340	do.	135.98	Without condition – Assignment already sanctioned by Government.
90	Nanthiyarkadkunnu (Kanthiyankode, Kunnuparamba)	do.	82/2B	do.	16.00	Assignable without conditions

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
91	Kolakkadmala	Vellinezhi	R.S.88 to 104 etc.	do.	133.91	Coconut and cashew
92	Uppukulam	Alanallur	1/1,208/1	Mannarghat	630.25	do.
Total for Thenakra Range					6501.48	
Agali						
93	Varagampadimala	Sholayur	1871, 1878, 35 etc	Manarghat Taluk, Palghat District	4.45	To be assigned on lease exclusively for tribals without conditions
94	Patlikkal	do.	---	do.	26.71	do.
95	Chindakulam	do.	---	do.	36.00	do.
96	Vatluki Anakaty	do.	303 to 305, 311, 353 to 356, 364 to 367, 404, 427 etc.	do.	1300.00	To be assigned on lease to tribals for collective farming
97	Koravampady (Pothuppady)	do.	---	do.	130.00	To be assigned on lease for the resettlement of tribals (*)
98	Varadimala	do.	---	do.	428.80	To be assigned on lease to Tribals for Collective Farming Scheme (*)
99	Vavuloor	do.	---	do.	135.60	To be assigned on lease without condition, exclusively for Tribals
100	Marudumala	do.	---	do.	400.00	To be assigned on lease to tribals for collective farm
101	Venkakad (Pothuppady)	do.	--	do.	28.80	To be assigned on lease without conditions, exclusively for tribals
102	Karuvara Chindakki	Agali	1,4,12,44	Manarghat Taluk, Palghat District	875.00	To be assigned on lease to Tribals for Collective Farming (*)
103	Kallamala	do.	1841 pt	do.	100.00	do.
104	Kakkupadi	do.	---	do..	16.80	To be assigned on lease exclusively for Tribals without condition
105	Pokkulam Kandiyoor	do.	174 pt	do.	4.75	do.
106	Kandiyoor Malavaram	do.	1841 pt, 219, 242, 246,1763,178 2 pt	do.	33.25	do.
107	Pokkulam Bit I	do.	174 pt	do.	1.75	do.
108	Thachamala	do.	1025, 1027 pt	do.	46.00	To be assigned on lease to Tribals for Collective

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						Farming Scheme.
109	Nakkupathi	do.	112, 1067, pt, 1117 pt	do.	84.00	do.
110	Nellipathimala (Pothuppady)	do.	1150 to 1153, 1170, 1174 pt, 1285, 1286, 1335 etc.	do.	257.50	do (*)

(*) Scheme already prepared by the Collector, Palakkad

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
111	Goolikadavu	do.	1054, 1074, 1056, 1707, 1203, 1202, 1173 etc.	do.	76.20	do.
112	Kottatharamala	Sholayur	620, 253, 639, 673, 675, 613 pt etc.	do.	305.00	do.
113	Puliyapathimala	do.	633, 634, 815 etc.	do.	19.00	do.
114	Pavakkamalavaram	do.	762 pt, 823 etc.	do.	18.00	do.
115	Bommamudi	do.	1275, 1267 pt	do.	15.00	do.
116	Kallakkara	do.	666 pt	do.	12.00	do.
117	Mattathikadu Malavaram	do.	209,210, 201,248, 249 etc.	do.	25.00	do.
118	Veettikkundu, Kottamala, Chevadi	do.	762,763, 774,890, 970,689 etc.	do.	1025.00	do.
Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
119	Patti Malavaram	Agali	482, 431 etc.	do.	60.00	do.
120	Vadakkekottathara	do.	549 pt	do.	17.00	do.
121	Naickerpadi	do.	742 etc.	do.	100.00	do.
122	Narassimukku, Parappanthodu (3 bits)	do.	337, 375 pt	do.	30.00	do.
123	Puthukutty, Malavaram (6 bits)	do.	337, 333, 957 etc.	do.	30.00	do.

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
124	Kattalakandy	do.	379 pt	do.	200.00	do.
	(a) Manthanchola	do.	1904, 1905, 2010	do.	400.00	do.
	(b) Onthumala	do.	2019/P	do.	62.00	do.
	(c) Thumpapara	do.	2019/P	do.	550.00	do.
	(d) Ommala	do.	(Un surveyed)	do.	250.00	do.
Total for Agali Range					7103.61	
Palghat Range						
125	Kuthiravattathu Nairs, Vallikode	Mundur – I	R.S. 186 to 189, 197, 198	Palghat Taluk, Palghat District	125.00	Cashew and fuel species
		Mundur - II Parali	10 51/5			
126	Ayyarmala	Kongad - I	381/1,3,5 to 9, 394	do.	322.00	Rubber, coconut and cashew. Tapioca , Hill Paddy and Banana as annual crop
		Parali - I	1/5A, 1/6, 1/7A,1/7F, 40/1,40/2, 40/31A, 40/3A2, 40/3C, 40/3, 3, 3A3			
		Parali – II	51			
		Mankara	1/1, 1/2A, 1/3, 73, 77, 79			
		Keralasseri	1,57,131, 134/1 to 6, 141/2, 142 & 143			
		Mundur	149			
Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
127	Thottathilkkunnu	Mundur – I	10,21,22, 24,25	do.	25.24	do.
128	Palakuzhikad Valarakkad	Mundur - I	350/A to C, 259/B, & C Pt	do.	67.18	Cashew
		Pudupariyaram	173/1 to 3			
129	Ezhakkad	Mundur – II	141/3,5	do.	24.55	Coconut
130	Panchamala	Mundur – II	217/, 218	do.	35.70	do.
131	Kallanparambu	Pudupariyaram	92 to 99,102/1	do.	14.53	do.

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
132	Velayudhan's Forest	do.	154/55	do.	12.80	Already ordered to be assigned without conditions
133	Right side M.S.P Camp	do.	173/6	do.	8.01	do.
134	In front of C.R.P. Camp	do.	119	do.	3.29	do.
135	Back side of M.S.P Camp	do.	171	do.	15.60	do.
136	Back side of C.R.P. Camp	do.	170	do.	7.36	do.
137	Narakkad Maruthamkad	do.	115 to 118, 120,121, 122B, 122A	do.	52.00	Cashew
138	Koonamkad	do.	124 to 130	do.	52.18	do.
139	Arumanikkad	do.	190, 191, 192/A to E, 196, 198 to 201 etc.	do.	13.52	Sugar-cane
140	Nochipalli Bits I to V	do.	---	do.	68.44	Cashew
141	Kodilampattakkadu	do.	28/1	do.	6.00	do.
142	Athippadam	do.	1,2,3 etc. 11,13,14, 73,75,76	do.	30.63	do.
143	Thadukkassery Bits I, II & III	Keralassery	252 B, 253, 255 to 257, 260	do.	48.91	Coconut, Rubber and Fruit trees
144	Vadasserikunnu	Keralassery	17,49,50, 125,126, 127 to 131,159, 104 and 106	Palghat Taluk Palghat District	69.45	Multiple, cropping with Coconut, Cocoa and Pepper
145	Pottayilkad 3 bits	do.	14, 11, 106	do.	19.11	Coconut, Cocoa, Tapioca
146	Ottupurakadu	do.	77 to 80	do.	14.80	Coconut, Tapioca
147	Kunnankadu	do.	129	do.	5.05	do.
148	Kodiyathukadu	do.	48,49,57	do.	26.96	do.
149	Chirakkalkadu	do.	110, 111	do.	6.75	Coconut and Cocoa, Tapioca as annual crop
150	Thirunelli Devaswam	Kongad II	283 to 285, 294, 296	do.	21.08	Coconut, Tapioca

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
151	Kozhisserimala	do.	232	do.	10.64	do.
152	Kottakkunnu (Bits I to III)	Kongad, Mundur – II	98 to 100 109 etc, 6, 8, 14, 18,1941, 17, 24, 25	do.	93.50	Coconut, Cashew
153	Parayancad Valarod	Mankara	8,1, 27, 28,83,84	do.	18.65	Coconut and Cashew to be grown
154	Cherumpalamala I to III bits	Mannur	50,61,63 to 67, 102 to 104, 117 to 120, 123,125, 103/C1, 114/1, 115/2, 127/1 etc, 118/14	do.	78.35	Coconut, Pepper, Paddy, Tapioca
155	Uthrampallam	Pudussery	639/B	do.	40.80	do.
156	Pamanpully	do.	877/B, 861 etc.	do.	34.00	do.
157	Pappathypallam	do.	621,623 etc.	do.	44.00	

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
158	Puthurkkad	Mannur	230, 231, 237	do.	13.50	Coconut, Cashew
159	Kottackad	Parali I	72, 117/1, 74	do.	17.16	Coconut
160	Valarakadu	do.	63, 67 to 69	do.	12.05	do.
161	Pathiyarakadu	do. I Do. II	80 to 82, 42	do.	7.36	do.
162	Elanimala	Pirayiri	71, 24, 25	do.	23.93	Coconut and fruit trees like mango, sapotta
163	Kallekkad, Kurichiamala	do. Vadakkan thara	1 to 4 1 to 7	do.	44.97	do.
164	Thandavankadu	Pirayiri	39, 40	do.	14.20	do.
165	Payattamkunnu	Akathethara	65	do.	5.28	Sugar-cane
166	Kottakkad Forest (*)	Malampuzha	R.S. 67/A/4B, 2D	do.	85.32	do.
	Do. (*)	do.	67/D1	do.	12.42	do.
	Do. (*)	do.	67/1A1	do.	112.22	do.
	Do. (*)	do.	1B1A2C	do.	22.23	do.
	Do. (*)	do.	1F1, 1F, 1F2	do.	27.14	do.
167	Kodukkamkunnu (*)	do.	695/A1 A1	do.	240.00	do.
168	Akathethara (*)	do.	1/8A1A	do.	300.00	do.
169	Kuthanoormala	Kuthanur	204, 205 etc.	Alathur Taluk, Palghat District	275.00	Cashew
170	Kavalappara Bit I	do. II	Part of 97 to 99, 216, 217	do.	28.41	Coconut, Cashew
171	Kavalappara Bit II	Tarur (Pazhambalakkal) Peringottu kurissi (Chulannur)	118 to 120, 131 to 133, 136 to 138, 82 to 95 (pts)	Alathur Taluk Palghat District	85.00	Coconut at lower levels and cashew higher up steep slopes

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
172	Pulikadakunnu Bit I	Kuthanoor II	207, 211	do.	14.72	Coconut and pepper, cashew on steep slopes and at the top. Tapioca and paddy as annual crop.
173	Do. Bit II	Tarur II Kuthanoor	41 part 213, 214, 247	do.	9.96	do.
174	Do. Bit III	Tarur - I do. Kuthanoor II	155,164,1 65, 1,42 part 45 to 48 part, Part of 204, 205	do.	21.30	do.
175	Do. Bit IV	Tarur II	37	do.	10.00	do.
176	Peruvaikunnu	Kuthanoor II	97 to 99, 131 etc.	do.	65.20	Coconut and Cashew
177	Kuthanoormala (Vedikkaran- kulambu, Thottiyankulambu)	Kuthanoor	R.S. 1	do.	270.35	do.
178	Kappilkunnu	Tarur I	Part of 35, 36, 37,46,	do.	30.32	Coconut and Cashew according to the slope and elevation
179	Chemminikunnu	do. II	69 part, 70, 87	do.	21.76	Cashew
180	Aalamkulambu	do. I	70 C part, 71 part	do.	4.25	do.
181	Valliankunnu	do. I Do. II	Part of 74 to 76, 80, 82 Part of 10, 21, 24, 25, 35, 51,53, 56 to 62	do.	126.00	Coconut, cashew higher up, Tapioca and paddy annual crop
182	Vavulliapuram	do. I	5, 6, 8, 9 etc.	do.	500.00	Coconut and cashew
183	Choolanur Bits I to IV	Peringottukurissi, Kuthanoor	Various Sl.No.	do.	718.04	Rubber, coconut, cashew as cash crop. Hill paddy and tapioca as food crop

(*) The State Farming Corporation of Kerala Ltd has requested to Government to allot these areas to them.

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
184	Marungamala and Vembalur Forest	Vemballur	..	do.	23.00	Coconut and cashew
185	Perukunnam Forests	Manjallur	..	do.	40.00	Coconut, tapioca, hill paddy
186	Vettakkad Forests	Kavasseri	..	do.	12.00	Coconut, tapioca
187	Vayyankunnu	Erimayur	..	do.	90.00	Cashew, coconut and tapioca
188	Malapathikunnu	do.	..	do.	22.00	do.
189	Nochiparakunnu	Kozhalmannam	..	do.	90.00	do.
190	Kuthiravattath kadu	Koduvayoor	..	Chittoor Taluk Palghat District	7.00	Assignable without conditions
191	Kottamala	do.	..	do.	25.00	Coconut, hill paddy
192	Vamala, Poomala	Pallassana	..	do.	26.00	Coconut and cashew
193	Koonbanmala Mankaramala, Pyronimala, Erathodemala	do.	..	do.	90.00	Cashew and groundnut
Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
(1)	(2)	(3)	(4)	(5)	(6)	(7)
194	Vannamala	do.	..	do.	10.00	Coconut, groundnut
195	Neerakode (Neermala)	do.	..	do.	10.17	do.
Total for Palghat Range					4,988.29	
Nemmara Range						
196	Vizhumala	Melarcode	1,2,4,6, 8, 9, 10, 17, 18	Alathur Taluk Palghat District	449.16	Cashew and tapioca and other subsistence crop
		Alathur	97, 254, 255, 259, 260, 273, 277, 278, 285 to 289			
		Alathur	258, 259, 254, 256, 260			
		Erimayur	4A, 11A, 11B, 12A, 12B, 13A			
		Vadakkancherry	107, 113 to 117, 120 to 122, 168			

Sl. No.	Name & Locality	Village	Survey No.	Taluk & District	Area in Hect.	Crop pattern
197	Cherumkade	Melarcode (Old Thekkethara)	145, 147, 148, 150, 151 to 153 part and 158 to 160 part	do.	16.49	Coconut, paddy and tapioca
198	Mangotkadu	do.	79 part, 82 part	do.	7.74	Coconut, cashew and tapioca
199	Andazhi Edamalakunnu 3 bits	Melarcode	112 k to u, 126, 127, etc.	do.	50.65	Rubber
200	Chettikulambu	.	359, 356, 359 to 365, 366, 367, 688, 1680, 1681, 1684 and 1685 part	Palghat District		
201	Alathur Investments	Padur	..	Alathur Taluk Palghat District	10.00	Cashew
202	Pezhumpara	Nemmara	626, 627, 897, 898, etc.	Chittoor Taluk, Palghat District	9.30	Coconut, Cocoa
203	Kaithachira	Kairady	603 etc.	do.	12.10	Coconut, paddy, tapioca
204	Agampadam 2 bits	Pothundy	553, 558, 582 etc.	do.	11.90	Sugar-Cane
205	Karimpara	Thiruvazhiode	1071 to 1076, 457 (part)	do.	8.52	Rubber
Total for Nemmara Range					614.62	

Total area for assignment in Palghat Division

Thankara Range	..	6501.48 Hectares
Agali Range	..	7103.61 ,,
Palghat Range	..	4988.29 ,,
Nemmara Range	..	614.62 ,,
Total for Palghat Division..		19208.00 ,,



Chapter 1

INTRODUCTION

1.0. Introduction

1.1. The Private Forests in the State of Kerala were taken over by the Government as per Ordinance No.14/71 issued by the Governor on 10th May, 1971. As per this ordinance, all private forests in the State of Kerala stand vested in the Government with effect from that date. This ordinance was later replaced by the Kerala Private Forests (Vesting & Assignment) Act, 1971, (Act 26 of 1971). The constitutional validity of this Act was challenged in the High Court by a few owners who were deprived of their private forests and the High Court on 21st June, 1972, declared that the Kerala Private Forests (Vesting & Assignment) Act, 1971, was unconstitutional and void. The state went on appeal to the Supreme Court against this decision and judgment was pronounced by the Supreme Court on 18th September, 1973 declaring that the Kerala Private Forests (Vesting & Assignment) Act, is constitutionally valid.

1.2. For the speedy implementation of the Kerala Private Forests (Vesting & Assignment) Act, 1971, a Special Officer was appointed in G.O.(Rt) 5347/PD., dated 19th October, 1973. Shri.T.Madhava Menon, I.A.S, who was appointed as Special Officer as per the above G.O. was ordered to function as Ex-officio Special Secretary to Government, Agriculture (Forest Special) Department (vide GO(Rt) 5471/PD, dated 30th, October, 1973).

1.3. Section 10 of the Kerala Private Forests (Vesting & Assignment) Act, 1971, lays down that Government shall after reserving such extent of private forests in the Government under sub-section (1) of section 3 or of the lands comprised in such private forests, as may be necessary for the purposes directed towards the promotion of agriculture or the welfare of the agricultural population or for purposes ancillary thereto, assign on registry or lease to categories of persons mentioned in that Section, the remaining private forests or the lands comprised in private forests.

1.4. For the implementation of the above provision in the Act, a Committee viz. The Vested Forests Committee was constituted with Special Officer for the implementation of the Kerala Private Forests (Vesting & Assignment) Act, 1971, as Chairman of the Committee (vide G.O. (Rt) 2624/73/AD, dated 28th November 1973

– See Annexure I). The Committee consisted of the following members in addition to the chairman.

1.	Secretary to Government, Revenue Department	Part-time Member
2.	Director of Survey and Land Records	Do.
3.	An Officer from the Agriculture Directorate in the grade of Additional Director	Full-time Member
4.	An Officer from the Forest Department in the cadre of Conservator of Forests	Do.
5.	An Officer from the Engineering Department in the grade of Superintending Engineer	Do.
6.	An Officer from the Law Department	Part-time Member
7.	An Officer from the Finance Department	Do.

Shri.O.V.Ummerkutty, Joint Director of Agriculture was appointed as Full-time Member and he assumed charge as Full-time Member on 11th March 1974. Though the original order in G.O.Rt.2624/73/AD., dated 28th November 1973, was that there should be a Full-time Member from the Forest Department, in the cadre of Conservator of Forests, these orders were revised and it was ordered that Shri.A.G.Menon, Conservator of Forests, Special Circle, Kozhikkode will be an Ex officio member of the Committee (Vide G.O.Rt.58/74/AD., dated 10th January 1974).

Shri.K.V.Abdul Azeez, Superintending Engineer was appointed as Full-time Member (Engineer) and he assumed charge of the post on 11th February, 1975.

The part-time members in the Committee were as follows:-

- (1) Shri.K.V.Ramakrishnan, Secretary to Government, Revenue Department.
- (2) Shri.K.Balakrishnan Nair, Director of Survey and Land Records.
- (3) Shri.K.Viswanathan Nair, Additional Law Secretary
- (4) Shri.George Zachariah, Joint Secretary, Finance Department.

The Chief Conservator of Forests (Development) Shri.K.K.Nair was later nominated as Part-time Member (vide G.O.Rt.764/74/AD., dated 25th March 1974).

1.4.1. *Establishment of Vested Forests committee at Calicut* - In G.O.Rt.784/74/AD., dated 26th March 1974, it was ordered that the Head Quarters of the Vested Forests Committee will be at Calicut. The following staff was appointed.

- | | | | |
|----|-------------------------|-----|-----|
| 1. | Secretary | ... | (1) |
| 2. | Assistant Grade – I | ... | (2) |
| 3. | L.D.Typist | ... | (1) |
| 4. | Stenographer Grade – I | ... | (1) |
| 5. | Stenographer Grade – II | ... | (1) |
| 6. | Peons | ... | (2) |
| 7. | Driver | ... | (1) |
| 8. | Part-time Sweeper | ... | (1) |

The staff appointed assumed charge with effect from 8th April, 1974 at Calicut.

1.5, The Kerala Private Forests (Vesting and Assignment) Rules, 1974, was published in the Gazette on 2nd January, 1975.

Rule 4 lays down that

“Government shall constitute a Committee to advise them in respect of:-

- (a) the suitability of lands for any of the proposes mentioned in rule 3;
- (b) the extent of lands which are necessary for any of the said purpose;
- (c) subject to the provisions of rules 7 and 8, the extent of land that may be assigned to individuals;

Explanation - Different extents of lands may be recommended for different areas and for cultivation of different crops.

- (d) Crop pattern suitable for the lands to be assigned.
- (e) Such other matters as may be entrusted to it by the Government”

In pursuance of the above rule, the Government reconstituted the Vested Forests Committee, with the following members (G.O.(MS) 50/75/AD., dated 22nd February 1975) (Annexure – II)

- | | | | |
|-------|---|-----|-----------|
| (i) | Special Officer for the implementation of the Act who shall be the Chairman | ... | Full-time |
| (ii) | Conservator of Forests, Special Circle, Kozhikkode – Ex officio Member | ... | Do. |
| (iii) | Shri.K.V.Abdul Azeez, Superintending Engineer, Public Works Department | ... | Do. |
| (iv) | Shri.O.V.Ummerkutty, Additional Director of | ... | Do. |

Agriculture

(v)	Chief Conservator of Forests (Development)	...	Part-time
(vi)	Secretary, Planning Board	...	Do.
(vii)	Shri.K.Viswanathan Nair, Additional Secretary to Government, Law Department	...	Do.
(viii)	Shri.George Zacharia, Joint Secretary to Government, Finance Department.	...	Do.
(ix)	Director of Survey and Land Records	...	Do.
(x)	Secretary, Land Board	...	Do.
(xi)	District Collector of Cannanore, Kozhikkode, Malappuram and Palghat Districts	...	Do.

1.6.1 *The meeting of the Original and Reconstituted Committees* – (1) The first meeting of Vested Forests Committee was held on 6th May, 1974 at the Conference Hall, Collectorate, Kozhikkode.

(2) The 2nd meeting of the committee was held on 18th June, 1974 at the residence of Minister (Finance) at Trivandrum.

(3) The Third Meeting was held at Malampuzha on 21st August, 1974.

(4) The Fourth Meeting of the Committee was held on 26th April, 1975 at Peruvannamuzhi.

(5) The Fifth Meeting of the Committee was held on 14th July, 1975 at Calicut.

(6) The Sixth Meeting of the Committee was held on 31st July, 1975 at Trivandrum.

1.6.2. *The first interim report of the committee* – Under para 3 of the G.O.Rt. 2624/73/AD., dated 28th November 1975th Vested Forests Committee has been charged with the responsibility of submitting a part report on the areas to be permanently reserved, within a period of four months which period expired on 8th August, 1974. Based on the decision of the Committee at its 2nd meeting held at Trivandrum on 18th June 1974, a report (part) on areas for permanent reservation was submitted to Government on 6th August, 1974.

1.6.3. Orders of Government laying down proportion of 1/3 of the land for assignment - In Government letter No. 48471/FS1/AD., dated 31st March, 1975 Government have ordered as follows :-

“Government after consideration of the report of the Vested Forests Committee have decided that about one-third of the total area of the ‘Vested Forests’ consisting of rocks, rivers and stream beds and the areas not available for agriculture of any sort, will be reserved; another one-third of the area consisting of land necessary for soil and moisture conservation, hydro-electric and other silvicultural purposes beneficial to the agricultural community will also be reserved and the remaining area of approximately one-third of the total area will not be reserved, but be made available for assignment”

1.6.4. Subsequent recasting of the lists, by the Committee – As per the directions of the Government mentioned in the above para, the Committee at its Fifth Meeting held on 14th July, 1975 at Kozhikkode have recast the lists of areas proposed for permanent reservation. The approximate area for permanent reservation according to this recast list is 110,634.82 hectares.

1.7. Brief resume of Field work done by Chairman and Full-time members – The Chairman and the Full-time Members conducted intensive tours for inspection of the forests vested with Government with a view to find out their suitability for the purposes envisaged in the order constituting the Vested Forests Committee. The Committee visited major part of the Vested Forests comprised in the 4 Special Divisions of Tellicherry, Kozhikkode, Nilambur and Palghat and also the areas of Vested Forests in the Travancore - Cochin. The main objects of the visit was to fix up areas suitable for assignment after making necessary reservation for purposes directed towards the promotion of agriculture or welfare of agricultural population. The visits were made to important river valley areas comprised in the Vested Forests, catchment areas of existing and proposed irrigation and hydro-electric projects with a view to ascertain the areas that have to be preserved for the protection of the reservoirs and the catchment areas. The Committee visited other areas also which can be assigned for cultivation by different classes of the agricultural population. The nature of areas, the suitability of the soil conditions, irrigation facilities etc. were taken into consideration for suggesting cropping pattern for such areas. It was during these visits that the Chairman and the Full-time Members of the Committee were able to locate vast areas in the Vested Forests in the Nilambur Division, suitable for growing sugarcane to the extent of nearly 7,000 hectares. Some of the areas inspected were taken up for formulating special schemes. Detailed surveys were conducted and preliminary reports have also been prepared for the sample schemes, (vide Annexures III A, III B,

III C, III D, III E, III F, III G, III H, III I, III J, III K). The areas suitable for settlement of tribals were also located during these inspections. The areas suggested for permanent reservation and for assignment in the Annexure VI are based mainly on the observation made during the inspection of the committee.

1.8. Association of Dr. Govindarajan – Government have considered the importance of utilising the areas comprised in Vested Forests and felt it necessary to have expert advice of an eminent Soil Scientist in the ultimate use of these lands. Accordingly Dr.S.V.Govindarajan, Emeritus Scientist, Regional Soil Correlation Centre, Hebbal, Bangalore-24 was appointed as consultant to the committee's work. Dr. Govindarajan visited the Vested Forests from 16th November, 1974 to 23rd November, 1974 and 27th and 28th, April, 1975, and inspected various tracts of Vested Forests and also attended the Fourth Meeting of the Vested Forests Committee. The observations made by Dr. Govindarajan during his inspection are furnished in Annexures IVB and IVC.

1.9. Acknowledgments – The Committee wish to place on record their gratitude to the Officer of the Forest and Survey Departments for their assistance in the work of the Committee particularly in relation to the inspection of the Forest areas by the Chairman and Full-time Members. The Committee are also thankful to the Soil Conservation Wing of the Agriculture Department for the soil survey work carried out for the preparation of the few sample schemes.

The Central Plantation Crops, Research Institute, Kasargode, and Indo-Swiss Project, Mattupetty have also given valuable assistance in the preparation of a multiple cropping scheme for the Anthimalankadu area and for dairy project in the Pookote area respectively. The Committee are thankful to these institutions also.

The Committee had the unique benefit of getting valuable advice from Minister (Finance) by his participation in the meetings of the Committee. The Committee is thankful to him.

The Minister (Harijan Welfare and Community Development) was kind enough to attend the Fifth Meeting of the Committee at Calicut on 14th July, 1975 and gave it the benefit of his valuable advice on special provisions to be made for the welfare of the tribal populations. The Committee records its gratitude to him.

CHAPTER 2

HISTORY OF THE LANDS COMPRISED IN VESTED FORESTS

2.0. Definition of Vested Forests – The Kerala Private Forests (Vesting and Assignment) Act, 1971 defines “Private Forests” as follows.

“(1) in relation to the Malabar district referred to in sub-section (2) of the section 5 of the of States Reorganisation Act, 1956 (Central Act 37 of 1956) :-

- (i) any land to which the Madras Preservation of Private Forests Act, 1949 (Madras Act XXVII of 1949), applied immediately before the appointed day excluding.
 - (A) lands which are gardens or nilams as defined in the Kerala Land Reforms Act, 1963 (1 of 1946).
 - (B) lands which are used principally for the cultivation of Tea, Coffee, Cocoa, Rubber, Cardamom or Cinnamon and lands used for any purpose ancillary to the cultivation of such crops or for the preparation of the same for the market.

Explanation:- Lands used for the construction of office buildings, godowns, factories, quarters for work-men, hospitals, schools and playgrounds shall be deemed to be lands used for purposes ancillary to the cultivation of such crops.

- (C) lands which are principally cultivated with cashew or other fruit-bearing trees or are principally cultivated with any other agricultural crop and
 - (D) sites of buildings and lands appurtenant to and necessary for the convenient enjoyment or use of, such buildings.
 - (ii) any forest not owned by the Government, to which the Madras Preservation of Private Forests Act, 1949 did not apply, including waste lands which are enclaves within wooded areas;
- (2) in relation to the remaining areas in the State of Kerala, any forest not owned by the Government, including waste lands which are enclaves within wooded areas.

Explanation:- For the purposes of this clause, a land shall be deemed to be a waste land notwithstanding the existence thereon of scattered trees or shrubs;”

These forests have vested in Government with effect from 10th May, 1971 under section 3 (1) of the Act, with the exemptions from vesting embodied in sub-clauses 3(2) and 3(3). It will be noticed from the definition that a clear distinction exists between the status of such lands in the Malabar area and the rest of the State. This distinction reflects in the difference in the administrative history of these tracts.

2.1. Malabar Area.

2.1.1. Origin – The “Jenmi” system as it developed in Malabar had the consequence that vast tracts of forest lands, unoccupied at the time of the original Land Revenue Settlement nearly a century ago, were considered as the “Jenmam” of some prominent Jenmi or other. As late as 1945, a survey conducted by the then Madras Government revealed that the private forests then measured 1200 sq. miles (Approx 7.5 lakh acres) and belonged to 116 individuals the extents owned by them varying from 100 to 100,000 acres¹.

2.1.2. *The Madras Preservation of Private Forests Act* – Until about World War II the Private Forests of Malabar remained in their prestige glory, attracting neither Man nor Government. However by 1945, conditions had become bad enough for the Government of the then Madras Presidency to be worried about the future of these areas. The Government were particularly concerned about the large scale and uncontrolled alienations which were the preludes to the denudation of these tracts. The Government were convinced about the need for a comprehensive legislation in this regard, but felt that emergent measures were unavoidable in the meantime. The Madras Preservation of Private Forests Act, “an Act to prevent the indiscriminate destruction of private forests and interference with customary and prescriptive rights therein

” was enacted “pending further legislation” as Act XXVII of 1949. This Act provided mainly that previous permission of the Collector of the concerned district was necessary before any alienation of private forests took place and that similar prior permission should be taken before cutting trees or doing “any act likely to denude the forest or diminish its utility as a forest”.

2.1.3. As recited in the preamble itself, the Madras Preservation of Private Forests Act was intended to be a temporary measure intended to safeguard the private forests pending further legislation. For various reasons, this was delayed; the formation of Kerala, changing circumstances and legal questions intervened.

¹ Quoted in the judgment of Palekar (J) in State of Kerala and another Vs. Gwalior Rayons, etc, S.C.C 1973-433

The Madras Preservation of Private Forests Act was being extended from time to time, but the implementation left much to be desired. The implementing authority was the Collector who had to act through the officers of the Forest Department. Penalties provided were often on paper only because prosecutions were not successful. The areas being mostly unsurveyed, felling permits could not be strictly policed. The owners had neither interest nor incentive for the proper management of the areas; they much preferred the easy money obtained by felling the timber. The pernicious system of allowing cultivation on the basis of “money receipts” opened the flood gates for the land hungry destroyers of forests. This system was a clever ruse because while there was no legal alienation of the land, the owner allowed some other person to cultivate the area from year to year, contravening only the conditions regarding the regeneration of felled areas. The result was that in general the objective of preserving the forest was not achieved.

2.2. In so far as the rest of the State is concerned, the private forests are mostly comprised in the areas occupied by Estates, but which the owners had not on 10th May, 1971 converted into plantations. Such tracts are mostly along the peripheries of the Estates, in inhospitable and infertile pockets nor suited for the plantation crops, on the ridges and in the swamps and marshes. In addition, timber areas left to natural regeneration and plantations teak, eucalyptus etc. raised by the managements also constitute vested forests. Generally speaking, these areas have been free of encroachments except in the recent past. Government do not seem to have contemplated taking over or even controlling these areas till 21st January, 1971 when the Kannan Devan Hills Produce (Resumption of Lands) Act was passed as a measure of Land Reform. In many respects, particularly, the scheme of agrarian reforms envisaged in this last mentioned Act is closely parallel with the Kerala Private Forests (Vesting and Assignment) Act.

2.3. Ultimately in 1971, the Kerala Private Forests (Vesting and Assignment) Act was passed by the Legislature and almost immediately challenged in the courts of law. As is now well known. The Kerala High Court struck it down on 21st June, 1972. A vacuum arose which was filled on 29th June, 1972 by the Kerala Preservation of Private Forests Ordinance, replaced on 2nd November, 1972 by the Kerala Preservation of Private Forests Act. Exploiting this vacuum, there were large scale fellings of valuable trees throughout the area. The “eclipse” of the Kerala Private Forests (Vesting and Assignment) Act came to an end with judgment of the

Supreme Court in the State of Kerala and Another Vs. The Gwalior Rayons Silk Manufacturing (Weaving) Company Limited on 18th September, 1973.

2.4.1. It may be appropriate here to briefly summarise the major provisions of the Act. The definitions have already been extracted in para 2.0. Under Section 3(1) all such lands vest in Government with effect from 10th May, 1971, but Sections 3(2) and 3(3) provide for exemptions in a limited measure to “owners” consistent with the provisions of the Kerala Land Reforms Act. Section 4 provides for management of the forests by extending the provisions of the Kerala Forest Act to them. Section 5 empowers the custodian to summarily evict encroachers and Section 6 obliges him to have the areas surveyed. Section 7 and 8 appoint Tribunals for the settlement of disputes. Section 10 is follows:-

“10 - *Assignment of private forests* – The Government shall, after reserving such extent of the private forests vested in the Government under sub-section (1) of section 3 or of the lands comprised in such private forests as may be necessary for purposes directed towards the promotion of agriculture or the welfare of the agricultural population or for purposes ancillary thereto, assign on registry or lease to

- (a) Agriculturists;
- (b) Agricultural labours;
- (c) Member of Scheduled Castes and Scheduled Tribes who are willing to take up agriculture as means of their livelihood;
- (d) Unemployed young persons belonging to families of agriculturists and agricultural labourers, who have no sufficient means of livelihood and who are willing to take up agriculture as means of their livelihood;
- (e) Labourers belonging to families of agriculturists and agricultural labours, whose principal means of livelihood before the appointed day was the income they obtained as wages for work in connection with or related to private forests and who are willing to take up agriculture as means of their livelihood,

the remaining private forests or the lands comprised in the private forests on such terms and subject to such conditions and restrictions as may be prescribed.

(2) The Government may, by notification in the Gazette, delegate their power under sub-section (1) to any officer of the Government or any class of officers of Government subject to such restrictions and control as may be specified in the notification.

(3) The extent of private forest or lands comprised in private forests which may be assigned to each of the categories of persons specified in sub-section (1) and the order of preference in which assignment may be made shall be such as may be prescribed.”

Section 15 constitutes the Agriculturists Welfare Fund.

2.4.2. The Kerala Private Forests (Vesting and Assignment) Rules have spelled out in Rule 3 the purposes for which vested forests can be reserved, viz:- “Private forests vested in the Government under the Act may be reserved for any one or more of the following purposes, namely :-

- (a) Purposes connected with the Agricultural University;
- (b) Farm Forestry;
- (c) Shelter belts;
- (d) Seed farms;
- (e) Agricultural farms and research farms intended for the promotion of agriculture or the welfare of the agricultural population or purposes ancillary thereto, owned by the Central Government or the Government of Kerala or a Government Company as defined in Section 617 of the Companies Act;
- (f) animal husbandry dairy development schemes owned by the Central or the State Government or a Government Company formed for the purpose;
- (g) hydro-electric and irrigation projects;
- (h) soil and moisture conservation;
- (i) construction and maintenance of roads and other means of communications;
- (j) such other purposes being purposes directed towards the promotion of agriculture or the welfare of the agricultural population or purposes ancillary thereto, as may be specified by the Government by notification in the Gazette.”

Rules 6 and 12 emphasise that the allotments of land are to individuals for personal cultivation and/or house sites. Rules 8 to 11 prescribe the various conditions or assignment Rules 13 and 14 provide: -

“13. *Assignee to become member of a co-operative society in certain cases* – (1) Every assignee shall, if so directed by the assigning authority become a member of a Co-operative Joint Farming Society or other Co-operative Society already registered or to be registered under the Co-operative Societies Act for the time being in force and shall not withdraw from the membership of that society except with the

previous approval of the Government or any Officer authorised by the Government in this behalf.

(2) If any assignee does not comply with the provisions of sub-rule (1), the assignment in his favour shall be cancelled.

14. *Co-operative society etc. to follow certain CROPPING pattern* - Every Co-operative Joint Farming Society or other Co-operative Society cultivating the lands assigned under these rules, and every assignee who is directed in that behalf by the Government or any Officer authorised in that behalf by the Government shall cultivate such crops and follow such cropping pattern and adopt such soil conservation measures in the lands assigned under these rules, as may be decided by the Government.”

Rule 15 obliges the custodian to hand over lands to be assigned to the Revenue Department and Rules 16 to 28 prescribe the procedure to be adopted by that department. Rule 29 constitutes the Vested Forests Fund the annual surpluses from which flow, under Rule 32 to the Agriculture Welfare Fund. This in brief outline is the scheme envisaged for the administration of the Act, and provides the framework within which this report has been prepared.

CHAPTER 3

DESCRIPTION OF THE LANDS COMPRISED IN VESTED FORESTS

3.1. General remarks

3.1.1. As mentioned in paras 2.1.2 and 2.1.3, the Madras Preservation of Private Forests Act did not achieve in full the purpose of either safeguarding the forests or preventing their alienation and fragmentation into smaller holdings. Replanting the areas was seldom done, but natural regeneration healed some of the wounds.

3.1.2. A much greater evil was in store. Impelled by land hunger, inspired by no desire nobler than that of quick profits and instructed in no agricultural methods more highly evolved than to cut and burn and dig anywhere and everywhere, armies of settlers ever-ran tract after tract of the new lands. The owners issued nominal money receipts which served as licences to occupy and denude as much area as each concerned holder of this bit of paper could manage. In less than a decade between 1960 and 1970 all the accessible and fertile areas had been occupied. During this rapid thrust, the margins of cultivation were extended further into the interior. Even nearly vertical slopes too steep for ploughing are now being painstakingly and pathetically wastefully dug into with hoes and pick-axes to support tapioca for as long as the soil holds out.

3.1.3. Certain publicists have sought to hold up these vandals as agricultural pioneers who have been responsible for introducing the “light” of commercial cultivation to the benighted denizens of Malabar. When however, the balance sheet of nature is written up, the destruction brought about by landslides caused by the reckless disturbance of steep slopes, the irreversible upsetting of the delicate ecological balances in the erstwhile evergreen forests, the silting up of water-courses, the floods and the droughts resultant from thoughtless draining of swamps and marshes which constituted supplementary storages of the monsoon rains far out weigh the selfish advantages gained by this class of voceferous miscreants masquerading as benefactors and the temporary increase in G.N.P accruing out of these activities. Most unpardonable has also been the dispossession of the Tribal population who were the original occupants of these areas and whose simplicity and lack of organisation has

been thoroughly exploited by this army of two-legged locusts who have settled on the Tribal lands.

3.1.4. BY 10.5.1971 THE DATE OF EFFECT OF THE KERALA PRIVATE FORESTS (VESTING & ASSIGNMENT) ACT, 1971 THE ABOVE PROCESS HAD ALREADY RESULTED IN THE CONVERSION OF MOST OF THE DESIRABLE AND ACCESSIBLE TRACTS INTO SETTLED AREAS EXEMPTED FROM THE DEFINITIONS IN THE ACT. WHAT REMAINS IS MOSTLY STEEP, ROCKY AND REMOTE BEYOND THE MARGINS OF ECONOMIC CULTIVATION. ANY PERSON INTERESTED IN CONSERVING THE RESOURCES OF THE SOIL, PROTECTING THE SOURCES OF THE WATERS OF THE RIVER SYSTEMS OF THE LAND AND PRESERVING THE REMAINING RICHES OF FLORA AND FAUNA WILL SHUDDER AT THE THOUGHT OF EXTENDING CULTIVATION INTO THESE AREAS. HOWEVER, THE CONSTRAINTS OF POLICY HAVE LAID DOWN THAT APPROXIMATELY ONE-THIRD OF THE AREA SHOULD BE ASSIGNED FOR CULTIVATION*. WHILE MAKING ITS RECOMMENDATIONS, THE COMMITTEE HAS TRIED TO STRIKE THE BEST COMPROMISES BETWEEN THE NEEDS OF CONSERVATION AND THE DEMANDS OF LAND HUNGER.

3.2. Geological Features

3.2.1. *Physical features:-* In the Malabar area, the Vested Forests occur mostly along the Western ghats linking with stretches of Reserve Forests. In the north, at Panathody, the Vested Forests adjoin the Reserve Forests of Karnataka state along the boundary down through the A.K. Forests in Koothuparamba until they join the Kottiyoor Reserve Forests. South of Baliapattam River the depleted vested forests once belonging to the Kottiyoor devaswom and now infested with settlers link up with the Periya and Kannothe Reserves and Vested Forests interspersed with them. The line of forests then bifurcates, one traversing and almost ringing round the Wynad Plateau, while the other follows the escarpment of the ghats. This latter line is resumed by Vested Forests around the Banasuram Peak and the ridge line, until it strikes a patch of denudation and vandalism around the Tamarasseri Ghats. Turning towards the east, the escarpment rises to the towering peaks of Velleri (7360 feet above M.S.L) and Vayotmala (7673 feet above M.S.L). The line curves through the Manjeri, Nilambur

* vide Government letter No. 48471/FS1/74/AD; dated 31st March, 1975 extracted at para 1.6.3.

Kovilakom, Gwalior Rayons Private Forests, is filled in by the New Amarambalam Reserve Forests resumes with the Vested Forests in Punchakolli, etc., forming the edge of the basin of the Nilambur Valley. It then bifurcates again, one branch following the curve of the northern lip of the Palghat gap, through the Silent Valley Reserve Forests, in, through, and out of the Attappady Valley and, filled in by the Reserve Forests of Palghat Division, resuming at the Emoor Bhagavathy and ending at the Vadassery forests right at the Coimbatore boundary of the State. The other line straggles through hillocks and scrub jungle irregularly across the Bharatapuzha Valley, with a few low peaks, e.g., Anangamudi (1201'), Vizhumala (1000'), Aylamudi (1808') until it joins up with the Southern lip of the Palghat gap at Akamalavaram and the Kollengode forests going east, and the Puzhakalidam and Nellikolidam forests towards west of the Parambikulam Reserve Forests.

3.2.2. *Settlement:-* As defined, areas under settlement, and cultivation are not Vested Forests and during survey and demarcation, these have been generally excluded. However, the following settlements of Tribal Communities have been identified.

<i>Special Division</i>	<i>Local name of Forest</i>	<i>Name of settlement Tribes and approximate number of households</i>	<i>Approximate area set apart (hectares)</i>
(1)	(2)	(3)	(4)
Palghat	Akamalavaram	Settlement – 1 Malayans, Kadars – 52	130.00
Do.	do.	Settlement – 1 Malamalasars – 30	75.00
Do.	do.	Kachithode – Malayans – 54	130.00
Do.	Vadassery Forest	Nadupathy – Irulars -26	65.00
Do.	do.	Chavadipara– Irulars -12	30.00
Do.	do.	Parapatty– Irulars -8	<u>20.00</u>
			<u>450.00</u>

This does not, however, reflect the real needs of the Tribal people in other areas. The dispossession of their lands has been so thorough that they are now compelled to lead a precarious existence in the shadow of Vested Forests. The most striking example of this is the Attappady area where a number of hamlets, eg. Kakkupady, Karuvampadi and Chindakki have been literally shattered and the inhabitants dispersed from their traditional homes. In the Wynad, where this process

has been taking place over a longer period of time, even the memories of the original settlements have been lost. THE COMMITTEE THEREFORE HAS PROPOSED THE EXCLUSIVE ALLOTMENT OF SUITABLE STRETCHES OF LANDS COMPRISED IN VESTED FORESTS IN ATTAPPADY AND WYNAD AREAS FOR THE RE-SETTLEMENT OF TRIBAL POPULATIONS, AS CONTEMPLATED IN THE SECOND PROVISIO OF RULE 8 OF THE KERALA PRIVATE FORESTS (VESTING AND ASSIGNMENT) RULES, 1974. THIS IS IN ADDITION TO THE PERCENTAGE FIXED FOR THEM IN RULE 8 (C) WHICH WILL APPLY IN OTHER AREAS.

3.2.3. As may be seen from the geographical distribution of the Vested Forests, along the edge of the western ghats, most of the important roads in Malabar pass through Vested Forests. It will be impossible to list all such roads and a few examples should suffice. The Tellicherry-Manantoddy road, the Calicut-Mysore road, Nilambur-Gudalur road, the Badagara-Manantoddy road all pass through the Ghat Sections in or along Vested Forests. In addition, the proposed North-South Hill road, the Mannarghat – Chinnathadaga road and roads to important projects located on the top of the ghats all will in - considerable extents, traverse Vested Forests.

3.2.4. *Climates* – It can be easily seen that occurring as they do along with the Reserve Forests along the escarpments and on top of the Western ghats, Vested Forests are important in influencing the climatic regime in the entire State. This is especially so in what may be called “cliamatologically critical” zones around the Palghat gap. This absolute discontinuity in the line of the Western Ghats enables the escape of rain bearing clouds in the monsoon and the ingress of hot dehydrating winds from the East during the dry months of the year. The straggling line of Vested Forests extending across the Bharathapuzha Valley influenced these to some extent, but over the years, it has become progressively less effective and when assigned as recommended in this report, will altogether cease to be. Ideally, there should be a series of “green belts” across the Bharathapuzha Valley but at least thick forest cover should be retained along the Northern and Southern ‘lips’ of the Palghat gap.

3.3. **River Catchments and Moisture Regime**

3.3.1. Compared to the extent of the State, Kerala is having a large number of rivers. There are 41 west flowing and 3 east flowing rivers almost all of them originating from the heights of Western Ghats and flowing down to the Arabian Sea on the West or to the Karnataka and Tamil Nadu States on the East to join the

Cauvery river. A list of these rivers extracted from the Government publication “Water Resources of Kerala” is appended (Vide Annexure V A). In their upper reaches, these rivers flow through dense forests both Reserve and Vested. Many hydro-electric and irrigation projects which sustain the economy of the State have been commissioned by harnessing the waters of these numerous rivers, which have proved to be a great boon to the Poor State of Kerala. Many other hydro-electric and irrigation schemes are under execution and still others are either being finalised or under investigation. A list of these schemes in Malabar area where the Vested Forests are concentrated is appended (Vide Annexure V B). The details are gathered from the Government publication “Water Resources of Kerala”.

3.3.2. In the interest of the projects, it is highly essential to protect the catchments of the rivers that feed the reservoirs of these projects by preserving the forests. Any failure to do this would result in soil erosion and consequent silting up of the reservoir long before their planned life spans, thereby allowing the huge investments on these projects to go to waste.

3.3.3. Many of the rivers are navigable in their lower reaches and they have been interconnected by a series of canals. Water transport being the cheapest mode of transport, it is essential to maintain the navigability of the waterways and contribute to the economy of the State. For this, silting up of the rivers due to the erosion of their catchments has to be guarded against. This again highlights the importance of preserving the forests in the steep slopes forming the catchment of these rivers.

3.3.4. Capacity of the water-courses gets reduced by silting up and this results in floods during monsoon. To avoid this, soil erosion which is the cause of silting up is to be prevented by preserving the forests in the catchments of the rivers.

3.4. Forests

3.4.1. The bulk of the Vested Forests is in the erstwhile Malabar area and lies between North latitudes $10^{\circ} 30'$ to $12^{\circ} 40'$ and East longitudes 75° to $76^{\circ} 80'$. The elevation of the areas forming of the Vested Forests varies between 100 m. and 2300 m. above M.S.L – the highest peak being the Vavutmala which is 2301.9.m. lying on the border between Kozhikkode and Nilambur Divisions. The topography is highly complex with many hillocks having moderate slopes at the foot hills to very steep slopes towards the ghats, and again moderate to steep slopes on the plateau. Some of the areas are very steep and even precipitous slopes with practically no tree-growth and rock exposed as in the case of large portions of Eموor Bhagavathy Devaswom

Forests near Malampuzha, top portion of the Thathengulam, portion of Tamarassery Ghat, Pasukadavumala of Kuttiady etc. Due to heavy and indiscriminate exploitation in the past, the standing growth is depleted of all valuable timber species in most of the Vested Forests except in some patches which are inaccessible as in the case of Kalladikkodanmala near Muthikulam, Chudupulan-Pulikan-Pakathvillary Malavarams of Kuttiady; and a few areas like Vadassery Forest of Palghat and A.K.Forests of Aralam where the erstwhile owners adopted proper protection and more conservative management. Just as in the case of topography, the soil conditions are also quite complex and varying from sheer rock with no top soil at all and high lateritic soil to black clayey soil and good sandy loam along river banks.

3.4.2. The main forest types that we come across within Vested Forests are:-

(a) *West coast tropical Evergreen Forests* – This can be seen in portions of Aaralam and Peria in Tellicherry Division; Kuttiadi, Kakkayam and Tamarassery ghat regions in Kozhikkode Division; top portion of Nilambur - Gudalur Ghat road near Kaduvakunnu; top portions of Kannothe Malavaram and Kozhiparamala near Kalikavu of Nilambur Special Division; and Kalladikkodanmala near Muthikulam and top portion of Eموor Bhagavathy Devaswom Forests near the limestone quarry site and portions of Nelliampathy Hills of the Palghat Division.

(b) *West coast Semi-evergreen Forests* – This can be seen is Odanthodu of Kuthuparamba Range, Thondernad Vested Forests of Manantody Range; Vested Forests near Brahmagiri of North Wynad, Vadakekottamala of Nilambur Division, Tariode and portions of North and South Wynad Plateau falling in Kapetta Range, Mukkali and Attappady in Palghat Division etc.

(c) *Moist Mixed Deciduous Forests* – This can be seen in portions of Gwalior Rayons Forests, Manjeri Kovilakam and Punjakolly Malavaram of Nilambur Valley; Cheeyambam and Pambra Forests of South Wynad; top portions of Vadassery Forests and portions of Akamalavaram etc. in Palghat Division .

(d) *Dry Deciduous Forests* – This can be seen in Vattappara and lower reaches of Vadassery Forests; and most of the lower regions of Palghat Range of Palghat Division like Walayar, Vallikodemala, Ayyarmala, Choolannur etc.

(e) *Grasslands* – There are vast stretches of grassland often with poor soil depth near Lakkiti in Vythiri ghat, top of Chembra Peak Estate; top of Peria ghat; and top of Attappady Valley and Nilambur Valley adjoining Nilgiri District of Tamil Nadu and top of Varagampady in Agali Range also adjoining Tamil Nadu.

3.4.3. About one-third of the total estimated area of Vested Forests of about 1,69,389 hectares i.e. about 58,000 hectares is to be cleared and assigned for cultivation by landless poor etc. of the remaining about 1,11,000 hectares only about one-third will be capable of allowing any scientific forestry operations which to a large extent will comprise of reclothing the denude slopes with tree crops for soil bunding and prevention of further erosion and gradually replacing the valueless species with valuable species in the few evergreen and semi-evergreen forests left; and also clear felling and planting up with valuable species like teak and fast growing industrial wood like eucalyptus, albiziafalcate etc. and also conserving and improving the natural regeneration of bamboos in some of the areas constituting regular bamboo coupes.

3.4.4. It is proposed to have detailed working plans prepared for the Vested Forests to be retained and managed under scientific forestry systems – Detailed management programmes will be prescribed in these working plans after detailed assessment of the various areas and consideration of all aspects.

However, a rough and brief description of the suggested management is given below:

(a) *Protection-cum-selection working circle* - Since most of the wooded areas except a few like Vadassery Forests, Cheriakunhamad's Forests, A.K. Forests, Gwalior Rayons Forests etc. were already over exploited in the past; and since a large extent of the Vested Forests proposed for retention will form the catchment areas of the various irrigation projects and since the few fast disappearing evergreen forests are to be retained as such, we have to include a major portion of the Vested Forests under this working circle, However, some selection-cum-improvement fellings can and should be carried out in selected portions of this working circle mainly in order to improve the stock of valuable species or gradually replace the present valueless species with valuable ones. This is quite necessary since in almost all such areas, especially the evergreen and semi-evergreen tracts practically all the valuable species or even the marketable species of any reasonable girth have all been extracted. These areas would have also been completely denuded but for the remoteness of these localities and it being uneconomical to work down small timber and firewood from here.

(b) *Conversion and plantation working circle* – The area under this working circle will mainly comprise of all available moderate slopes with little or

sparse tree growth and grasslands with sufficient top layer of soil to permit artificial regeneration of fast growing and or valuable tree species. Such re-clothing is essential to prevent further soil erosion and exposure of bare-rock as in the portions of Emoor Bhagavathy Devaswom Forests. Areas like lower slopes of Vadakkekottamala, Kottachokkadanmala, Pullengode Estate Forests (clear felled in 1969-70); Akamalavaram and grassland of Chembra Peak and Lakkiti side will come under this category. Also areas with fair growth of deciduous forest and suitable for planting teak, eucalyptus etc. will also be taken for clearfelling and planting, Lower slopes of Punjakolly Malavaram, Gwalior Rayons Forest, Manjeri Kovilakam Forest, etc. of Nilambur Valley, Cheeyambam and Pambra and the lower portions of Vadassery Forests etc. will come under this category. The forests adjoining to old tea estates like Bhagavathy Estates of Talapoya etc. can also be clearfelled and planted with eucalyptus hybrid for supply of fuel to these tea factories in future. The vast eucalyptus plantations of Gwalior Rayons (about 9600 acres) and teak plantations of Manjeri Kovilakam and Pullangode Estate of Nilambur, teak plantations of Kokkadan Mammu Haji and Pambra Estate of Kozhikkode Division, teak plantations of Puzhakalidam and Vadassery etc. of Palghat Division will come under the plantations of this working circle. These plantations will be silviculturally managed and worked. It can also be considered to raise cardamom plantation in some of the evergreen forests on rather steep slopes and valleys as in Chudupullan of Kuttiady and Kaduvakkunnu of Gwalior Rayons forests on Vazhikkadavu ghat of Nilambur. The Central Plantation Crops Research Institute, Kasargode may also be willing to take up research in cardamom plantations in these areas.

There are large areas in the flat country of Palakkad District which come under the Madras Preservation of Private Forests Act and were worked under coppice system for fuel (6 years rotation). These are practically devoid of tree growth and contain only small sized coppice growth. All such areas are being given for assignment along with small bits of teak plantations on the banks of Chaliyar river and its tributaries in Nilambur.

(c) *Bamboo and Minor Forest Produce Working Circle* – The major bamboo and reed areas in the Vested Forests are the top portions of Vadassery forests, portions of Akamalavaram adjoining Sungam Range and top portions of Manjeri Kovilakam, Punjakolly and Kannothe malavarams of Nilambur Valley. In some portions of the Gwalior Rayons Eucalyptus Plantations beyond Vellakatta there is

profuse regeneration of bamboos and very few eucalyptus. In such areas, the bamboos should be allowed come up and worked in due course along with the adjoining Punjakolly area. In such areas it may be worthwhile to give preference to bamboo over eucalyptus since the former is a more valuable industrial raw material. The bamboo and reed areas will be properly divided into convenient annual coupes and worked as per management systems adopted in the reserved forests. Minor forest produce can also be worked as in the reserve forests.

3.5. Wild life in Vested Forests

3.5.1. The forests comprised in the areas vested with the Government under Kerala Private Forests (Vesting and Assignment) Act come under different categories like evergreen, semi-evergreen, deciduous grasslands etc. All the species of wild life which would thrive under the respective ecological conditions should have been available in these areas formerly. However, indiscriminate exploitation of the areas for timber and for game have caused considerable loss of wild life that existed in these forests and it is feared that some of the important species would have even become extinct.

3.5.2. There are certain areas particularly those adjoining reserve forests like Vadassery Forests and Akamalavaram in Palghat Division, Cheeyambam forests in Kozhikkode Division and forests in adjoining Silent Valley in Nilambur Division, where there are still thick forest cover, Important species of wild life namely elephants spotted deers, monkeys, deers and birds exist in these areas. These have to be protected by adopting stringent conservation practices. There are suitable areas in the Vested Forests which can be maintained as Wild Life Sanctuaries.

3.6. General precautions recommended while utilising these lands:- It will have become abundantly clear from the above discussions that utmost care has to be exercised while opening up these marginal lands for cultivation. The policy dictate that approximately one-third of the area available should be assigned for cultivation has compelled the committee to include areas for assignment where the slopes are steep and where tree-cover is essential for maintaining ideal ecological balance. The Committee, therefore, emphasises that the following general precautions for protecting soil, climate and moisture are inescapable pre-conditions before commencement of cultural operations.

3.6.1. "Protection" area – In order to meet the target of allotting one-third of the area, the Committee has had to locate certain large blocks for assignment. The

topography of the region is such that it is inevitable that there will be steep hills and patches with thin soil cover in such tracts. The Committee considers that while assigning them, the necessity for “protecting” them from the hazards of soil erosion should be fully recognised. The Committee has therefore, recommended “cashew” as the only permissible crop in such areas even though it will be ideal not to disturb the soil at all. While planting cashew, care should be taken that the lines of trees should be along the contours on bunds to be formed at proper intervals.

3.6.2. Soil conservation - The Committee EMPHASISES THAT IN MOST OF THE AREAS TO BE ASSIGNED SUITABLE SOIL CONSERVATION MEASURES ARE ABSOLUTELY ESSENTIAL AS A NECESSARY PRE-CONDITION. This implies that, as each area is handed over to the Collectors, during the time-gap that will inevitably occur before the Collector can assign the lands to the ultimate beneficiaries, Soil Conservation Surveys and works should be undertaken, While this is a technical and engineering problem to be tackled uniquely for each tract, the Committee makes the following general suggestions :-

3.6.2.1. *Gully plugging* – The debirs viz. small branches, top ends, twigs and leaves resulting from the clearfelling of these areas before assignment should not be removed, but should be utilised for plugging the gullies already formed and for strengthening bunds at vulnerable spots.

3.6.2.2. *Tree crops* – Wherever possible; the Committee has recommended tree crops, eg. coconut, cashew and rubber or crops requiring tree covers, eg. coffee and cardamom. The committee envisages that such utilisation of lands will be preceded by proper terracing and soil stabilisation. **Trees should, as far as possible, be planted along the contours.** Suitable intercropping, eg, coconut, cocoa, pineapple and pepper or coconut and tapioca has also been recommended because such utilisation will induce proper soil and moisture management. The Committee also recommends that when the boundaries between the plots of two adjacent assignees are marked out a line of suitable trees, etc; neem or glyricidea may be planted and the assignees charged with their maintenance. The Committee hopes that in the rest of the areas where tree crops have not been specified, at least one-third will be covered by some species of trees.

3.6.2.3. *Grasslands*:- It has not been possible for the Committee to exclude grasslands from the areas proposed for assignment. The Committee recommends that such areas should be retained for grasses and cultural operations should be aimed only

at improving the varieties of grasses for animal husbandry. The Committee warns that if grass cover in such tracts is removed, it will yield to sheet-erosion and exposure of the bed-rock within a short time.

3.6.2.4. *Swamps and Springs*:- While the Committee has tried to ensure that the head-waters of river-systems do not fall in assignable areas, it has not been possible to exclude all swamps and springs. These form what may be called the “foetal” stages of mighty rivers and may be tampered with only at the peril of diminution in the life-giving and sustained yield in them. **The Committee therefore recommends generally that, should a swamp or spring occur in an area to be assigned, it should be a condition of the assignment that the assignee protects it to the satisfaction of a designated Irrigation Engineer having jurisdiction in the concerned area.**

3.7. T.C. Area – Full details of Vested Forests in the erstwhile Travancore-Cochin areas have not yet been received. The area as now reported is only 6844 hectares. The full time members of the Committee inspected some of the areas in Trichur, Kottayam and Idukki Districts.

3.7.1.1. In Trichur District there are extensions of the Vested Forests areas in the adjoining Palgaht District, which have been recommended for assignment **CONSISTENTLY WITH THAT THE COMMITTEE RECOMMENDS THE ASSIGNMENT OF THESE AREAS WITH SIMILAR STIPULATION REGARDING SOIL CONSERVATION MEASURES, CROPS AND CROPPING PATTERNS.**

3.7.1.2. The Committee however located an area of about 16.29 hectares in R.S. 320 to 323 Thiruvilwamala Village in which unexpectedly, there was profuse regeneration of sandal wood. The Chief Conservator of Forests (Dev.) has proposed that this area and some surrounding land may be retained as a research plot under the Forest Department, for study of the conditions which have led to such a phenomenon. **THE COMMITTEE THEREFORE RECOMMENDS THE RESERVATION OF FORTY (40) HECTARES INCLUDING THIS PLOT UNDER RULE 3 (e).**

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3.7.2. The Collector, Kottayam District has reported that there are no Vested Forests in that District. The full-time members however saw an area, locally known as “Vedikuzhi” which is actually the nearly vertical escarpment of the High Ranges of the Idukki District and forms the boundary between the two districts. Perhaps due to

its inaccessibility, the area supports good tree cover and these should be carefully preserved in order to protect the soil and prevent lands slides. The Collector's attention has been specifically drawn to this and his report is still awaited. THE COMMITTEE RECOMMENDS THE PERMANENT RESERVATION OF THIS AREA.

3.7.3. The bulk of the Vested Forests in Travancore-Cochin area fall in the Idukki District. As already mentioned in para 2.2, they originally formed parts of Plantation Estates. An area known as Jeerakakkadu (R.S.No.794, 795 of Peruvanthanam Village) is steep, well-wooded and adjacent to the Ranni Reserve Forests of the Kottayam Division. This is unfit for cultivation because of the steepness of the terrain and the evergreen nature of the vegetation. There is another Vested Forest in an area near Laha Estate and adjoining Rajampara Reserve Forests of Ranni Range in Ranni Division. This is a wooded area with fairly good stocking. THE COMMITTEE RECOMMENDS THE PERMANENT RESERVATION OF THESE AREAS AS "PROTECTION FORESTS", AND THE ASSIGNMENT OF THE REST TO INDIVIDUALS FOR THE CULTIVATION OF TREE CROPS INCLUDING EUCALYPTUS SPECIES, CROPS REQUIRING TREE COVER Eg, COFFEE AND CARDAMOM DEPENDING ON SOIL AND CLIMATE, AND SURVIVAL CROPS.

3.7.4. In the rest of the Travancore-Cochin area, Vested Forests are in bits and patches and the COMMITTEE RECOMMENDS ASSIGNMENT TO INDIVIDUALS WITHOUT CONDITIONS.

CHAPTER 4

AREAS RECOMMENDED FOR ASSIGNMENT

4.1. Limitations – Survey of the Vested Forests is still progressing. The Committee has on the basis of the data already available, taken the utmost care and caution to identify each tract and assess its extent as accurately as possible. HOWEVER, IT HAS TO BE EMPHASISED THAT THE AREAS ARE APPROXIMATE AND SUBJECT TO MEASUREMENT ON COMPLETION OF THE SURVEY. THE AVAILABILITY OF THESE LANDS IS FURTHER SUBJECT TO THE DECISIONS OF THE FOREST TRIBUNALS WHERE A NUMBER OF DISPUTES IN RELATION TO THEM ARE PENDING. THESE LIMITATIONS APPLY ALSO TO THE AREAS PROPOSED FOR PERMANENT RESERVATION REFERRED TO IN CHAPTER 5.

4.2. Lists – Annexure VI is the detailed list of areas, arranged according to the Special Forest Divisions, which more or less coincide with the Revenue Districts. The conditions of assignment have been specified in each case.

4.3.1. *Detailed soil survey and crop pattern* - The areas proposed for assignment are of varying topography and soil condition. The soil conservation practice mentioned in para 3.6 and the crop patterns indicated in the list of areas for assignment are general and for large areas. Since the assignments will be made in plots of 2 hectares (4 hectares for cashew) detailed soil survey for each area should be conducted and crop patterns fixed for each plot before assignment. This will have to be got done by the Agriculture and Soil Conservation Field Staff in the districts.

4.3.2. *Sample schemes for utilisation* – The Committee has had prepared a few sample schemes for some areas to be assigned. The time as well as the resources available to the Committee was too short to prepare project reports, but it is hoped that the sample schemes indicate the lines on which project reports could be built up Annexures IIIA, IIIB, IIIC, III D, III E, III F, III G, III H, III I, III J, III K.

4.4. Special provision for assignment to Tribals – The second proviso to Rule 8 enables the Government “If they are satisfied that it is necessary to promote the interests of the Scheduled Tribes allot separate blocks of lands only to members of the Scheduled Tribes”. The Committee has been fully conscious of the special distress and needs of the Tribal population. In so far as Tribal Communities resident

within Vested Forests are concerned. eg., in the Vadassery Forests, the Committee has recommended earmarking of lands for their occupation even though the tract as a whole has necessarily to be protected as a forest for the reasons envisaged in Rule 3. This is because it would be possible to so integrate them with forestry operations that the dangers of utilisation in these “reserved” tracts are strictly controlled. In other areas, like Wynad and Attappady, special tracts have been set apart exclusively for them. A Sample scheme for a dairy community for Scheduled Tribes based on the grasslands at Pookote in South Wynad is at Annexure III C.

4.5. Lands to be assigned for sugar-cane cultivation – Rule 3 (e) provides for the reservation of lands for agricultural farms for the promotion of agriculture owned by a Government Company as defined in section 617 of the companies Act. The Aralam Farm owned by the State Farms Corporation of India require additional land (1800 hectares) for its expansion. The State Farming Corporation of Kerala, a Government Company exclusively owned by the Kerala Government, has also required 7784 hectares for cultivating sugar-cane. At the Fourth Meeting of the Vested Forests Committee at Peruvannamuzhi on 26th April, 1975, doubts were expressed whether reservation of lands and handing them over to the Government Companies would strictly be within the Rules. This question has been referred to the Government for a decision. However the Committee is bound by the decision taken at the Fourth Meeting and accordingly 1800 hectares proposed for the Aralam Farm and 6984 hectares in Nilambur Special Division and 800 hectares in Palghat Special Division proposed for sugar-cane cultivation have also been proposed for assignment on joint farming basis. The Committee recommends that in so far as the lands at Aralam are concerned, coconut and cocoa with pepper should be the approved crop.

CHAPTER 5
AREAS PROPOSED FOR RESERVATION

5.1. Limitations - THE LIMITATIONS MENTIONED IN PARA 4.1 ABOVE APPLY EQUALLY TO THE RECOMMENDATIONS IN THIS CHAPTER ALSO.

5.2. Lists - Annexure VI is the detailed list of areas proposed for preservation. The purpose under Rule 3, which justifies such reservation is briefly mentioned in each case.

CHAPTER 6
SUGGESTIONS FOR FUTURE MANAGEMENT

6.1. Lands to be assigned

6.1.1. *Tahsildars to keep Registers* - Rule 27 (1) lays down that the Tahsildars shall maintain a register showing the lands with his jurisdiction which have been assigned under these rules with particulars of the assignees. The Committee recommends the following as the Form of Register to be prescribed.

..... Taluk

..... District

Register of vested forests assigned

Name of village	SI.No. of assignment in the village	Name of assignee	R.S.No.	Extent hectares	Conditions of assignment	Subsequent change, if any in assignee	Annual certificate
1	2	3	4	5	6	7	8

An extract of this Register should be forwarded to each village and be maintained by the Village Officer concerned.

6.1.2. *Annual Inspection* - Rule 27 (2) enforces that the Tahsildar shall conduct a periodical check-up of the assigned lands to ensure that the conditions of the assignment are not violated. The Committee recommends that the periodicity should be at least once a year. It should be the personal responsibility of the Tahsildar to inspect each of such lands at least once a year and attach the annual certificate incorporated in column 8 of the Table in para 6.1.1.

6.1.3. *Formation of co-operative Organisations* – The proviso to Rule 6 lays down that “where the lands form part of a compact block, in respect of which a common cropping pattern is deemed necessary by the Government, the assignment shall normally be on lease” Rules 13 and 14 provide for membership of Co-operative

Society and for the Co-operative Society so formed to follow the prescribed cropping patterns. From the list in Annexure VI, it may be seen that assignment in compact blocks have been proposed in the majority of cases and the cropping patterns have also been briefly indicated. The Co-operative Organisation in the State should be suitably strengthened in order to effectively implement these provisions.

6.1.4. *Preparation of detailed development Plans* - The sample schemes (see paras 4.3. and 4.4 and Annexures IIIA, IIIB, IIIC, III D, III E, III F, III G, III H, III I, III J, III K) appended to this report would indicate the possibilities in this regard. For each compact block in the lists in Annexure VI, it should be possible to prepare detailed project reports. In many cases, instead of non-nucleated development, now the rule in the State, it may be possible to locate a suitable dwelling area where a “Garden-City” lay out could be attempted with common facilities. The homesteads could have small kitchen garden around each, but the main agricultural areas could be commonly cultivated, and laid out according to soil and ground conditions. Such development will facilitate proper planning of village industries like apiary and dairy farming with modern cow-sheds, gobar gas plants and the like. It is recommended that the primary responsibility for co-ordinating these schemes may be laid on the Revenue Divisional Officers under the direct personal supervision of the District Collectors.

6.1.5.0 *Special provisions for implementation of Tribal Schemes* - The Committee is indebted to the Minister (Harijan Welfare and Community Development) for the suggestion that special measures may be recommended for the speedy implementation of schemes intended for the benefit of the Tribal populations.

6.1.5.1. The recommendation in para 3.2.2 above falls in two parts; viz. in Wynad and Attappady areas, lands will be exclusively assigned for Tribal beneficiaries, and in the rest of the areas they will be entitled to their share as laid down in Rule 8 (c). As alienation of Tribals’ lands is a continuing threat THE COMMITTEE RECOMMENDS THAT ALL SUCH ASSIGNMENTS SHOULD BE ON LEASE.

6.1.5.2. Most of the Tribal population will be covered by Integrated Area Development Programmes. It is therefore necessary to closely follow up the assignment of land to them with development programmes, and in fact even to recast the programmes in order to accommodate the increased holdings of land resultant from the assignment. This is particularly important in the case of the block

assignments proposed in Wynad and Attappady which have been envisaged as rehabilitation schemes. These areas are additionally covered under the Special Schemes for Wynad and Western Ghat development projects. The committee is happy to note that the Collector, Palghat has already taken considerable initiative in the matter and has prepared five schemes in Attappady, of which it is understood, two have been approved for inclusion in the Western Ghat development schemes. Annexure IIIC a similar scheme for a dairy colony in Vested Forests for Paniyas, one of the “decisively backward” sections of the Tribal population, in S. Wynad which has been proposed for inclusion in the Wynad Development Programmes. THE COMMITTEE RECOMMENDS THAT THE HIGHEST PRIORITY SHOULD BE ACCORDED FOR THE PREPARATION OF SUCH SCHEMES FOR EACH OF THE BLOCKS PROPOSED FOR ASSIGNMENT EXCLUSIVELY FOR TRIBAL POPULATIONS.

6.1.5.3. It is also necessary that a sense of emergency should pervade the implementation of the programmes intended for the Tribal benefit. Recognising this, the Government have already formed a Department of Tribal Welfare, and posted the Custodian, Vested Forests as the Special Officer in charge of this Department. THE COMMITTEE RECOMMENDS THAT THE SPECIAL OFFICER TRIBAL WELFARE MAY BE AUTHORISED TO INITIATE ACTION IN THIS REGARD IN ANTICIPATION OF THE PROCEDURAL REGULARISATION OF ASSIGNMENT BY THE COLLECTORS UNDER THE RULES. THIS WILL HELP BOTH THE SPEEDY IMPLEMENTATION OF THE SCHEMES AS WELL AS THEIR CLOSE INTEGRATION WITH THE GENERAL WELFARE PROGRAMMES.

6.1.5.4. The Minister (Finance) emphasised that both in the Reserve Forests and in the Vested Forests, the welfare of the Tribal population resident in them or dependent on them should be a primary responsibility of the Forest Department, and of the Government. THIS IMPLIES THE GENERAL EXTENSION OF BENEFITS ALREADY ENJOYED BY SUCH SETTLEMENTS IN THE RESERVE FORESTS TO THOSE IN THE VESTED FORESTS AND THE COMMITTEE RECOMMENDS THE ISSUE OF A GOVERNMENT ORDER ACCORDINGLY.

6.2. Lands to be permanently reserved as Forests.

6.2.1. *Reconstitution of existing Reserve Forests Divisions:-* If the recommendations of the Committee are accepted, an area of 110,634.82 hectares will

be permanently reserved. These will have to be managed as reserve forests. The present area of reserve forests in the Malabar District is 1,91,000 hectares, and thus effectively the total area under reserve forests will be nearly doubled. The existing Special Forest Divisions as well as the territorial Divisions may then have to be reconstituted.

6.2.2. *Preparation of working plans:* - This addition to reserve forests area has some difficult features. Except for the A.K. Forests and the Vadassery forests, no working plan has been ever prepared for these areas. Many of them have been so badly denuded that they present peculiar difficulties for scientific forestry. Preparation of interim working schemes and regular working plans has therefore to be accorded the highest priority.

6.2.3. *Accounts:-* Rule 29 (2) (a) provides that “monies received by the Government by the sale of trees on the lands reserved under sub-section (I) of section 10 and other incomes received by Government from such lands” shall be funded in the Vested Forests funds. The explanation to Rule 29 (3) indicates that, “The purposes referred to in this sub-rule include administration and up-keep of the areas retained as forests and payment of the Pay and Allowances of Officers and staff employed in connection with the areas reserved as Forests.” Thus all monetary transactions in regard to the Vested Forests managed as Reserve Forests funds will have to be separately maintained. The Forest Department will have to issue necessary directions in this regard.

6.3. Funds

6.3.1. *Agriculturists Welfare Fund:-* Section 15 of the Act provides for the constitution of Agriculturists Welfare Fund which is proposed to be utilised for the settlement and welfare of persons to whom private forests or lands comprised in private forests have been assigned under section 10. The Agriculturists Welfare Fund will consist of grants or loans by or from the Government by sale of trees standing in such portion of the private forests as are or may be assigned under section 10. This will also consist of the annual surplus from the Vested Forest Fund allotted by the Custodian with the sanction of the Government as provided under Rule 32 of the Kerala Private Forests (Vesting and Assignment) Rules, 1974, to be utilised for purposes directed towards the promotion of agriculture or welfare of the agricultural population.

6.3.2. *Vested Forests Fund*: – Rule 29 of the Kerala Private Forests (Vesting and Assignment) Rules, 1974, provides for the constitution of the Vested Forests Fund. This includes:-

(a) Monies received by the Government by the sale of trees standing on the lands reserved under sub-section (1) of section 10 and other income received by the Government from such lands.

(b) Grants or loans by or from the Central or State Government;

(c) Donations from the public and institutions; and

(d) interest accruing from investment if any, of the amounts standing to the credit of the fund.

6.3.3. The agriculturalist Welfare Fund shall be administered by a Board with the District Collector, Kozhikode as Treasurer, as provided under Rule 35 of the Kerala Private Forests (Vesting and Assignment) Rules, 1974.

6.3.4. The Vested Forests Fund shall be administered by the Custodian and an Officer not below the rank of Conservator of Forests shall be the Treasurer.

6.3.5. The Committee understands that Government are issuing detailed instructions in this regard.

1. Sri.T.Madhava Menon (Signed)
Chairman
2. Sri.A.G. Menon (Signed)
Conservator of Forests
Special Circle, Kozhikode
Full-time Member
3. Sri.O.V. Ummerkutty (Signed)
Additional Director of Agriculture and
Full-time Member
4. Sri.K.V. Abdul Azees (Signed)
Superintending Engineer and
Full-time Member
5. Dr.P.K. Gopalakrishnan (Signed)
Secretary
Planning Board
Part-time Member
6. Sri.K.Viswanathan Nair
Additional Law Secretary
Part-time Member
7. Sri.K.K. Nair (Signed)
Chief Conservator of Forests
(Development)
Part-time Member

8. Sri. P. George Zacharia (Signed)
Joint Secretary (Finance)
Part-time Member
9. Sri.P.Balakrishnan Nair (Signed)
Director of Survey and Land Records,
Part-time Member
10. Sri.P.V. Sankunni Warriar
Secretary
Land Board
Part-time Member
11. Sri.N. Kunhikoya
District Collector
Cannanore
Part-time Member
12. Sri K. Theyyunni Nair (Signed)
District Collector
Kozhikode
Part-time Member
13. Sri Ramachandra Chowdhary (Signed)
District Collector,
Malappuram
Part-time Member.
14. Sri P. Shanmugha Sundaram,
District Collector, Palghat
Part-time Member

**REPORT OF THE
VESTED FORESTS COMMITTEE 1975**