

**SCHEME FOR COMPENSATORY AFFORESTATION AT PULIKUNNU UNDER
VANDANPATHAL FOREST STATION IN KOTTAYAM DIVISION IN LIEU OF 0.7945
Ha FOREST LAND DIVERTED FOR THOTTIYAR HYDRO ELECTRIC PROJECT,
KARIMANAL, IDUKKI FROM MUNNAR TO BODIMETTU IN MUNNAR DIVISION**

EXTENT - 1.00 Ha (Effective Area-0.7945 Ha)

ERUMELI RANGE

KOTTAYAM DIVISION

HIGH RANGE CIRCLE

KERALA FOREST AND WILDLIFE DEPARTMENT

**SCHEME FOR COMPENSATORY AFFORESTATION AT
PULIKUNNU UNDER VANDANPATHAL FOREST STATION
ERUMELI RANGE OF KOTTAYAM DIVISION**

(Power evacuation from Thottiyar Hydroelectric Project in Munnar Division)

I. SITE PARTICULARS

- i Division : Kottayam
- ii Range : Erumeli
- iii Station : Vandanpathal
- iv Extent : 1 Ha (Effective area 0.7945 Ha)
- v Budget Head : CAMPA

- vi District /Taluk/ Village : Kottayam/ Kanjirapalli / Erumeli North
- vii Location / Boundaries : This area is part of 1965 Teak plantation, Kulamakkial and is located at Pulikunnu under Vandanpathal Forest Station of Erumeli Range

Site is surrounded by 1965 Teak plantation Kulamakkail in east, north and west and private lands in the south.
- viii Catchment : There is Manjalaruvi thodu near the plantation area and it flows to Manimalayar river
- ix Nature of the site : This is part of 1965 Teak plantation and the area is left barren of trees and the entire area is covered with the aggressive and perennial vines *Pueraria phaseoloides* and *Mucuna bracteata* commonly known as Thottapayar, a cover crop in nearby rubber plantations covering the entire area and choking the growth of left out trees followed by fire in some years making the area barren.
- x Criteria for selection of site : This is part of 1965 Teak plantation and the area is now lying barren with no trees left and the entire area is covered with perennial vines *Pueraria phaseoloides* and *Mucuna bracteata*. It is the catchment area of

Manimalayar and hence the area can be planted with local miscellaneous tree species

It is highly essential to plant in the area in order to prevent soil erosion and for recouping the vegetation and soil status of the area. The land is having good soil fertility and can support trees if effectively planted and protected from biotic interference especially weeds and proper fire tracing work.

II. Proposed institutional arrangements	:	The work is proposed to be undertaken under CAMPA and normal departmental procedures for plantation rising will be followed. Protection mazdoors shall be engaged departmentally and by VSS. All the works shall be under the regular inspection of staff of Vandampathal Forest Station strictly monitored by Range Forest Officer, Erumeli under the guidance of Divisional Forest Officer Kottayam and the Chief Conservator of Forests, High Range Circle Kottayam
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III. SITE ASSESSMENT

(a) Soil Type	:	Laterite and sandy loam soil interspersed with rock
Soil Cover	:	100 % covered by vines in rainy season and fire affected and barren in summer
Soil erosion	:	Possibility of soil erosion is moderate
Slope	:	< 20%
Catchment condition	:	Moderate.
Rainfall	:	Annual rainfall varies around 2500 mm to 3000 mm
Temperature	:	25° to 35°
(b) Forest conditions	:	
Canopy cover	:	0%
Regeneration status	:	Low.
Weeds	:	The entire area is covered with the vines <i>Pueraria phaseoloides</i> and <i>Mucuna bracteata</i> . Because of weed cover, no natural regeneration is happening the area

Fire hazards : Medium risk

(c)

Biotic interference

Grazing intensity	:	High
Firewood collection	:	Nil
Fodder and Grass collection	:	Less
Illicit felling	:	Nil
Fire damage	:	Medium
Invasive weeds from adjoining lands	:	High

IV OBJECTIVES OF THE PLAN

1. As significant to boost the forest biodiversity and for eco-restoration of forest area, it is proposed to convert the area to a natural forest.
2. To convert the weed infected open area to natural forest
3. To arrest the degradation of the site by a combination of physical and vegetative soil conversion measures.
4. To improve the water regime in the area by improving vegetative cover in the area arresting the surface soil run off.
5. To improve the edaphic condition in the area by soil binding and moisture conservation actions.

V WORK PROPOSED

The proposed work is to convert a failed plantation area into natural forest. The failure was due to earlier illicit felling and invasive weeds from nearby rubber plantations. This requires weeding the entire area and uprooting the cover crop manually. Thereafter seedlings of miscellaneous species will be planted in approximately 2 m X 2m spacing in 30 cm X 30 cm pits and platform of 60 cm X 60

cm will be taken. Where tall seedlings are available pits of 45 cm X 45 cm will be made and platform of 1 m X 1m and spacing of 2.5 m X 2.5 m will be followed. Routine weeding and manual uprooting of cover crops whenever needed will be done. Plantation will be maintained for 10 years with major inputs in first three years.

VI. ESTIMATES (for 1 to 10 years)

1st Year

Estimate for the cost of Compensatory Afforestation at Pulikunnu under Vandanpathal Forest Station of Erumeli Range

BH:									
Sl No	Quantity		Particulars	FSR Item	Rate	Labour data		UNIT	Amount
1	1	Km	Clearing boundary line to a width of 1.5 m to facilitate survey.	1	857	3.105 MM	Km	3.105 MM	2660.99
2	1	Km	Surveying with prismatic compass	2	857	3.105 MM	Km	3.105 MM	2660.99
3	10	Nos	Fixing boundary stones (PWD stones size 60x20x20 cm)	PWD 784	29	LS	LS	LS MM	290.00
4	1.00	Ha	Clearing heavy jungle growth without felling trees	114	857	19.768 MM	Ha	19.77 MM	16942.89
5	2500		Making platform of size 60x60 cm with 30 cm depth inward slopes	GO (Rt)101/90 F&WLD (q)	857	1.3015 MM	100nos.	32.54 MM	27884.64
6	2500		Digging pits of size 30x30x30cm in ordinary/hard soil for basketed seedlings	GO (Rt)101/90 F&WLD	857	1.3015 MM	Hard soil after rain/100 pits	32.54 MM	27884.64

7	2750		Transport of seedlings in polythene bags/root trainer to planting sites & distribution up to a lead of 50m(20% for each additional 50m)	GO (Rt) 1081/88 (t)	857	0.116MM	100	3.19 MM	2733.83
8	2500		Covering pits, digging planting holes & planting seedlings.	GO (Rt) 1081/88 (u&v)	857	0.650 MM	100	16.25 MM	13926.25
9	1.0	Ha	Replacing casualties	91 (b)	857	0.8MM	Ha	0.8 MM	685.60
10	1.0	Ha	First year 2 nd weeding (Aug-sep)	93	857	14.286 MM	Ha	14.286 MM	12243.10
11	1.0	Ha	First year 3rd weeding (Nov-Dec)	94	857	9.884	Ha	9.884 MM	8470.59
12	1	Km	(i) Clearing fire line to a width of 5.2 m (ii) Fire tracing	GO (Rt)614/79/AD 48	857	40MM	Ha	40 MM	34280.00
13	10	M2	Construction of temporary shed(Should be restricted to 10 sqm)	63	857	10.763 MM	10 Sqm	10.763 MM	9223.89
15	340.25	MM	VDA		104	LS	LS	340.25 MM	35386.00
16	LS	LS	Contingencies		LS	LS	LS	LS	2726.59
17	200	Days	Engaging man-mazdoor for protection	LS	660	LS	LS	200 MM	132000.00
18	Ls	Ls	Soil Moisture Conservation Works	LS		Ls	LS	LS	120000.00
TOTAL									450000.00

2nd Year

Estimate for the cost of II year maintenance of Compensatory Afforestation at Pulikunnu under Vandanpathal Forest Station of Erumeli Range

3rd Year

Estimate for the cost of III year maintenance of Compensatory Afforestation at Pulikunnu under Vandanpathal Forest Station of Erumeli Range

4th year to 10th year maintenance work will be carried out which include special weeding including uprooting of vines, platform maintenance, fire protection works and provision for protection watcher.

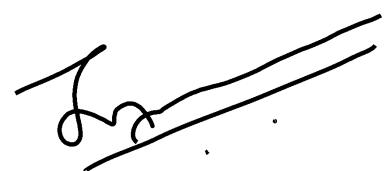
Financial Forecast of Compensatory Afforestation at Pulikunnu under Vandanpathal Forest Station of Erumeli Range

Abstract (lakhs)

Raising and first year maintenance	1.00 Ha	4,50,000.00
Second year maintenance	1.00 Ha	4,00,000.00
Third year maintenance	1.00 ha	3,00,000.00
4 th year to 10 th year maintenance (7X 250000)	1.00 Ha	17,50,000.00
Total		29,00,000.00

VII. Sketch

KML file attached



Divisional Forest Officer
Kottayam Forest Division

Chief Conservator of Forests
High Range Circle
Kottayam