Work schedule

Raising nursery for native tree species with 10 yr maintenance for Compensatory afforestation of 280 plants in degraded forest area in Ulundurpet Range of Villupuram division during 2022-2023 under CAMPA scheme

SI. No.	Description of Work	Period of work
1	2	6
1	Raising nursery - 280 Nos	June 2022 to February 2023
2	Planting operation including brush wood fencing around each plants	March 2023 to August 2023
3	1st year Maintenance	September 2023 to March 2024
4	2nd year Maintenance	September 2024 to March 2025
5	3rd year Maintenance	September 2025 to March 2026
6	4 th year Maintenance	September 2026 to March 2026
7	5 th year Maintenance	September 2027 to March 2027
8	6 th year Maintenance	September 2028 to March 2028
9	7 th year Maintenance	September 2029 to March 2029
10	8 th year Maintenance .	September 2030 to March 2030
11	9 th year Maintenance	September 2031 to March 2031
12	10 th year Maintenance	September 2032 to March 2032

100

District Forest Officer, Villupuram Division, Villupuram.

Abstract Model estimate for Raising Compensatory afforestation of 280 plants in degraded forest area during 2022-23 under State CAMPA scheme

No. of seedlings :

254

For 10% casualty replacement :

26

TOTAL

280 Nos

SI. No.	Description of Work	Proposed estimate cost in Rupees	Remarks
1	2	3	4
1	Raising nursery - 280 Nos	51000	1000 Nos of seedlins per ha has been proposed
2	Planting operation - 254 seedlings	173800	10% Weightage towards escalation of labour wage rate during 2023-24
3	1 st year Maintenance	108134	20% Weightage towards escalation of labour wage rate during 2024-25
4	2 nd year Maintenance	106600	30% Weightage towards escalation of labour wage rate during 2025-26
3	3 rd year Maintenance	114800	40% Weightage towards escalation of
6	4 th year Maintenance	3000	50% Weightage towards escalation of labour wage rate during 2027-28
7	5 th year Maintenance	3300	60% Weightage towards escalation of
8	6 th year Maintenance	3630	70% Weightage towards escalation of
9	7 th year Maintenance	3993	80% Weightage towards escalation of
10	8 th year Maintenance	4392	90% Weightage towards escalation of
11	9 th year Maintenance	4832	100% Weightage towards escalation of
12		5315	110% Weightage towards escalation of
	TOTAL	582795	

588681.96

Prorata for 1 ha area

District Forest Officer,

Villupuram Division,

Villupuram. Villupuram.

Model estimate for Raising nursery for native tree species for Compensatory afforestation of 280 plants in degraded forest area during 2022-2023 under State CAMPA scheme

Total Area

Gap planting

Size of Polybags = 13 x 25 x 250g

Seedlings

280 Nos

Transplanting Size of Polybags = 30 x 45 x 600g

No of Seedlings =

254

Proposed Espacement = Gap planting

10% Casuality =

Species proposed for planting

26

Native species like Vembu, Velvel,

Total 280

Nelli, Naval, Vengai, Red Sanders,

lluppai etc.,

Wage rate 2022-2023 = Rs.

475.75

(Grade-I/Class A areas - Chennai, Tiruvallur, Kancheepuram, Nilgiris, Tirunelveli Districts)

						jilis, Tilulic		,	
SL.	Qty	Unit	Name of Work	FSR / SSR	FSL	Rate	F	Per	Amount
PAR	T I - Sma	II size ba	ags 13X25 cm.						
1	31	M²	Preparation of Nursery site by clearing and levelling the site for forming standard bed of size 10mX1m (110M2/1000 Nos)	4.1	2.42	1151.32	200	No	178
2	0.56	Kg	Cost of seeds (2kgs/ 1000 Nos)	LR		250.00	1	No	140
3	280	Nos.	Cost of 13x25cmx250G poly bags	Tender rate		944.00	1000	No	264
4	1.00	Cum	Forming germination beds of size 10mx1mx 0.3m by heaping the soil - 2500 No per bed	PWD SSR item 62		73.10	1	cum	73
5	2.00	Bed	Watering the germination beds twice daily with rose cans for 15 days	4.5.1	0.82	390.12	10	Beds / day	1170
6	2.00	Bed	Watering the germination beds once daily with rose cans for 15 days	4.5.2	0.41	195.06	10	Beds / day	585
7	0.24	Cu.m	Collection & supply of sand, silt and red soil according to the requirement for preparation of soil mixure - 3/4th of the total volume (0.84 M3/1000 Nos)	LR		750.00	1	Cu.m	180
8	0.08	3 Cu.m	Cost and transport of Farm yard manure for filling bags - 1/ 4th of the total volume (0.28 M3/1000 Nos)	. LR		750.00	1	Cu.m	60

	Qty	Unit	Name of Work	FSR / SSR	FSL	Rate		Per	Amoun
	280	Nos.	Preparation of soil mixture by breaking clods, seiving, mixing red soil, silt, sand according to requirement and farm yard manure in the ratio of 3:1, heaping at the filling site and filling in poly bags, arranging bags in beds and pricking out the seedings (excluding cost of soil mixure and FYM)	4.6.4	4.48	2131.36	1000	Nos	597
0	7	Kgs.	Cost of Vermicasting @ 25 gram per seedlings	As per Research	-	10.00	1	Kg	70
1	3	Kgs.	Cost of VAM @ 10 gram per seedlings	Wing Rate	-	18.00	1	Kg	54
12	1	Kg	Cost of Azospirilum @ 5 gram per seedlings	As per Research	-	27.00	1	Kg	27
13	1	Kg	Cost of Phosphobacteria @ 5 gram per seedling	Wing Rate	-	27.00	1	Kg	27
14			Watering the container plants with rose cans -						
a	280	Nos.	Twice daily - 15 days	4.10.4	0.23	109.42			460
b	280	Nos.	Once daily - 30 days		0.115	54.71	1000	Day	460
С	280	Nos.	Alternate days spread over 30 days (Effective days-15)	4.11.4	0.115	54.71			230
15	280	Nos.	cost of water for watering the container seedlings - 60 watering days	4.18 - FSR 1998-99		0.85	1000	day	11
16	280	Nos.	Land rent @ 3000 bags/40 sq.m) - 3 Months	4.17	LR	86.00	40	sq.m/mo nth	179
	27.72	months							
17	280	Nos.	Shifting the container plants, weeding, grading and replacement of casualities in the bags (-shifting to done once in 21 days, first shifting not before 45 days after pricking out) 2 shifts	4.15.4	0.51	242.63	1000	Shift	136
-		1	SUB - TOTAL (A)					4901
PA	RTII - B	igger si	ze bags: 30x45cmx600g.						
18	28			Tender rate		9263.00	1000	No	2594

SL. No	Qty	Unit	Name of Work	FSR / SSR	FSL	Rate		Per	Amount
19	2.58	М3	Collection & supply of sand, silt and red soil according to the requirement for preparation of soil mixure - 4/5th of the total volume (excluding the volume of earth in 13X25cm containers). (@ 9.23 Cu.m/1000 Nos)	LR	-	750.00	1	М3	1935
20	0.65	M3	Cost and transport of Farm yard manure for filling bags - 1/5th of the total volume. (@ 2.31 Cu.m/1000 Nos)		-	750.00	1	М3	488
21	280	Nos.	Preparation of soil mixture by breaking clods, seiving, mixing red soil, silt, and sand according to requirement and farm yard manure in the ratio of 4:1, heaping at the fillingsite and filling in poly bags, arranging bags in beds and pricking out the seedings (excluding cost of soil mixure and FYM)	4.6.7	28.57	13592.18	1000	Nos	3806
22	10	Kgs.	Cost of Vermicasting @ 35 gram per seedlings	As per Research	-	10.00	1	Kg	100
23	4	Kgs.	Cost of VAM @ 15 gram per seedlings	Wing Rate	-	18.00	1	Kg	72
24	1 2	. Kg	Cost of Azospirilum @ 6 gram per seedlings	As per Research	-	27.00	1	Kg	54
2	5 2	2 Kg	Cost of Phosphobacteria @ 6 gram per seedling	Wing Rate	-	27.00	1	Kg	54
2	6	Mazdo s	Labour cost for transplanting seedlings from 13 X 25 cm containers bags in to 30 X 45 cm containers - 10 Maz. / 1000	As per ME of MTP		475.75	1	Nos	1427
2	27 28	0 Nos	Cost of vertical strick (Casurina poles 5 cm -8 cm girth and 2.50 m height for each plants)	PWD SSR		17.50	1	Rm	12250
	28 14	10 Nos	Cost of horizondal strick (Casurina poles 5 cm -8 cm girth and 1.00 m height for each plants)	PWD SSR		17.50	1	Rm	2450
	29 2	80 No	Tying plants to the vertical stick once in a month - 2 times	ME		0.40	1	Each/	224
	30 2	80 No	s. Pruning side branches once in 2 months 2 times	ME		1.00	·	time	560
	31		Watering the container plants with rose cans						

SL. No	Qty	Unit	Name of Work	FSR / SSR	FSL	Rate	Per		Amount
а	280	Nos.	Twice daily - 15 days	4.10.7	0.56	2 66.42	1000	Day	1119
b	280	Nos.	Once daily - 30 days	4.11.7	0.28	133.21	1000	Shift	1119

.

SL. No Qty Unit Name of Work FSR / SSR FSL Rate c 280 Nos. Once in alternate days -spread over 60 days (Effective days-30 days) 4.11.7 0.28 133.21 10	Per 00 Shift	Amount 1119
6 780 1006 4 1 1 1 1 1 1 1 1	00 Shift	1119
d 280 Nos. Twice in a week spread over 105 days (Effective days-30 days) 4.11.7 0.28 133.21 10	00 Shift	1119
32 280 Nos.	sq.m/mo	2503
166.3 m2/7 months Land rent @ 500 bags/40 sq.m) 4.17 LR 86.00 4	nth	2503
Shifting the container plants, weeding, grading and replacement of casualities in the bags - shifting to done once in 21 days- 7 shift Shifting the container plants, weeding, grading and replacement of casualities in the bags - shifting to done once in 21	0 Shift	2508
34 280 Nos. cost of water for watering the container seedlings - 105 watering days 1.60 10	0 day	47
35 0.01 Nos. Nursery protection mazdoors 1 No / As per 100000 Nos of 30 x45cm bags - 300 ME of days. (90d+210d) MTP	100000/ M	78
36 GST 18% (Item No.3, 17)		514
Provision for cost of pesticides and fungasides and Labour charges for application of pesticides - 2 times / month	times	3000
39 L.S Photo & Documentation etc., L.S		4000
39 L.S Contingencies unforseen items L.S		2958
SUB - TOTAL (B)		46099
TOTAL (A + B)		51000

Raising cost for 990 seedlings = 51000

cost for 1 seedlings = Rs

51.51

per seedling

158.09

Specifications:

1) No. of seedlings has been proposed for planting based on the Government of India Letter F.No.11-423/2011-FC dated 08.11.2017, compensatory afforestation has to be carried out at 1000 seedlings per ha. Hence 254 nos of seedlings has been proposed for 0.1266 ha @ 1000/ha. with 10% of casuality 26Nos. Totally 280 Nos of seedlings has been proposed.

wing. Research prescrribed by norms per applied as be Bio-fertilizers may 2) 3) The estimate has been prepared based on NHAI/MTP model estimate, FSR, PWD SSR for the year 2022-23 and the local rate as per model estimate and Research Wing rate.

140

District Forest Officer, Villupuram Division, Villupuram.

Model estimate for Raising nursery for native tree species for Compensatory afforestation of 280 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of seedlings = 254

Size of Polybags = 30 x 45 x 600g

10% Casuality = 26

Wage rate = Rs.

475.75

Total = 280

2022-2023

Total			200			2022-20	25		
SI. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
1	254	Nos	Aligning and Marking in plantation area	5.2.4	1.38	656.54	100	Nos	1668
2	254	Noel	Digging of 60 CM3 pits in all types of soil during non rainy season	5.8.1	9.26	4405.45	100	Nos	11190
3	200		Cost & transport of Farmyard mannure each plants 0.60x0.60x0.20=0.072m3/pit	Lowest quotation	-	750.00	1	M3	13716
	18	M3	oden plante electronesses are also also pro-	•					
4	254	Nos	Application of Farm yard manure by mixing in the pit before planting - 1 mazdoor for 200 Nos	FSL Wage rate	1.00	475.75	200	No	604
5	254	Nos	Cost of Bio fertilizer including cost of application - Vermicompost - 1 Kg, Bio Fertilizers - 100 gms, VAM- 100 gms	NHAI ME	-	7.70	1	No	1956
6	280)	Transporting saplings (transported to the radious of 40 kms) excluding loading and unloading by Private Vehicle	NHAI ME	-	7.00	1	No	1960
7	280	Nos	Loading & unloading the container seedlings (30x45cm) in private lorry upto a lead of 2kms excluding hire charges for the vehicles.)	5.11.7	3.29	1565.22	1000	Nos	438
8			Distribution of saplings from where seedlings are stocked to the planting spot in plains upto 500 mts						
а	11	2 Nos	Upto 100 mts	5.15.1	10.00	4757.50	1000	Nos	533
b	11	2 Nos	Upto 200 mts	5.15.2	17.50	8325.63	1000	Nos	932
	5 5	56 Nos	Upto 500 mts	5.15.3	41.00	19505.75	1000	Nos	1092
,	9 25	54 Nos	Planting the container plants by refilling pits of size 60cm.	5.22	1.71	813.53	100	Nos	2066
1	10 454	1.5 RM	Provision of vertical casurina poles 5cm to	PWD SSR		17.50	1	RM	7954
	11	26 No	Replacement of casualties by reopening failed pits and planting the seedlings (1/2 pitting rate on rainy days + full planting rate)	5.23	6.34	3016.26	100	Nos	784
- 1	SI.	Qty	Description of work	F.S.R. No.	FSL (Man days)	1	Per		Amount

						, , , , , ,	Total p	$\overline{}$	17380
						Add 109	% of esca	alation	1580
21	LS	; 	Contingencies and unforseen expenditure to be restricted to as per actuals.			LS	T	OTAL	2272 15800
20	L.S	S	Photo & Documentation etc.,						
19	Ę	Mont hs	application of pesticides - 2 times / month	L.R	-	200 LS	1	time s	2000
18	254	Nos	Removing/scrapping vizal monsoon or bothai grass for one meter dia around the plants	5.27	0.21	99.91	100	Nos	254
17	0.01	Nos.	Plantation Protection mazdoors from October to March - 180 m.days	Wage rate	1	475.75	1	M. Days	856
16	567000	Ltrs	Cost of water @ 20 liter per seedlings 15 waterig days (1890x20x15=567000 Lts)	NHAI ME		1200.00	12000	Lts	56700
15	254	Nos	Watering the plants once in 6 days during summer/non-rainy period from January to March @ one mazdoor for 200 plants/watering day (15 watering days)	NHAI ME		475.75	200	Nos	9063
14	254	Nos	Providing Brush wood fencing around each plants	-	0.25	118.94	1	No	30211
13	254		Forming catch water drains for each plant of 90x45x 30 cm size in hillocks and hard gravelly soil	5.26	6.84	3254.13	100	Nos	8265
12	254	Nos	Scraping for 1m dia and soil working 15cm depth around each plants and removing the grass roots away from the site of upturning the soil	5.24	1.23	585.17	100	Nos	1486

- 1) No. of seedlings has been proposed for planting based on the Government of India Letter F.No.11-423/2011-Specifications: FC dated 08.11.2017, compensatory afforestation has to be carried out at 1000 seedlings per ha. Hence 254 nos of seedlings has been proposed for 0.1266 ha @ 1000/ha. with 10% of casuality 26 Nos. Totally 280 Nos of seedlings has
- 2) Rates for the works in SI No. 2 and 8 have been provided for plains. If the area identified for compensatory been proposed. afforestation is in hilly terrain, the rates for the hills may be followed.
- 3) The estimate has been prepared based on NHAI/MTP model estimate, FSR, PWD SSR for the year 2022-23 and the local rate as per model estimate and Research Wing rate.

MAD

District Forest Officer, Villupuram Division, Villupuram.

Model estimate for 1st year maintenance for Compensatory afforestation of 990 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of seedlings planted

254

No of Seedlings for

casulty replacement = 26

Size of Polybags = 30 x 45 x 600g

(10% replacement)

Wage rate = Rs. 475.75

SI. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
	A. NURSE	RY OF	PERATION						
1	26	No	Raising cost of seedlings in 30x45 size polythene bags (As per nursery estimate)	As per nursery estimate	-	158.09	1	No	4112
-							TOT	AL (A)	4112
-	B. PLANT	ING O	PERATION						
1	10	No M3	Cost & transport of Farm yard manure each plants 0.60x0.60x0.20=0.072m3/pit	Lowest	-	750.00	1	m3	1404
2	13		Application of Farm yard manure by mixing in the pit before planting - 1 mazdoor for 200 Nos	FSL Wages Rate	-	475.75	200	Nos.	31
3	26	Nos.	Transporting saplings (transported in the radius of 40 Kms) excluding loading and unloading in Private vehicle	NHAI ME		7.00	1	No.	182
4	26	Nos	Loading & unloading the container seedlings (30x45cm) in private lorry upto a lead of 2kms (excluding hire charges for the vehicles.)	5.11.7	3.29	1565.22	1000	Nos	41
5			Distribution of seedlings in the site C.plants upto 500mtrs - in plains						
а	10.4	Nos	Up to 100 m.	5.15.1	10.00	4757.50	1000	Nos	49
b	10.4	Nos	Up to 200 m.	5.15.2	17.50	8325.63	1000	Nos	87
С	5.2	Nos	Up to 500 m.	5.15.2	41.00	19505.75	1000	Nos	101
6	26	Nos	Replacement of casualties by reopening failed pits and planting the seedlings	5.23	5.57	2649.93	100	Nos	689

T						T 501	1	T		T
1. lo		Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amou
7		254	Nos	Scraping for 1m dia and soil working 15cm depth around each plants and removing the grass roots away from th site of upturning the soil	ө 5.24	1.23	585.17	10	0 Nos	148
8		254	Nos	Cost of Bio Fertilizers including cost o application Vermi-campose 1 kg,Bio fertilizer 100 gms VAM 100 Gms	NHAI ME	-	7.70	1	No.	1956
9	59	94000	Ltrs	Cost of water @ 20 liter per seedlings 30 watering days (990x20x30=594000 Lts)	NHAI ME		1200.00	12000	Lts	59400
1	0	26	0 Nos	Watering the plants once in 6 days (excluding rainy days) from April to June & January to March @ one mazdoor for 200 plants/watering days)	y 4.11.7	0.28	475.75	200	Shift	18554
	11	0.0	01 No	Engaging protection Mazdoor @ 1 Mazdoor from April to March - 12 months (25 days/ Month)	FSR wage rate	-	475.75	1	No	1427
	12		LS	Contingencies and unforseen expenditure to be restricted to as per actuals.			LS			593
-								TOT	AL (B)	86000
+					TOTAL (A+B)					90112
-						Add 20%	of escalation			18022
t								Total p	rorata	108134

Specifications:

1) The estimate has been prepared based on NHAI/MTP model estimate, FSR, PWD SSR for the year 2022-23 and the local rate as per model estimate and research wing rate.

2) The rate for the work in SI No. 5 has been provided for plains. If the area identified for compensatory afforestation is in hilly terrain, the rates for hills may be adopted.

3/40

District Forest Officer, Villupuram Division, Villupuram.

Model estimate for 2nd year maintenance for Compensatory afforestation of 990 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of Seedlings =

254

Survival 100%

254

Wage rate = Rs.

475.75

2022-2023

SI. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
1	254	Nos	Scraping for 1m dia and soil working 15cm depth around each plants and removing the grass roots away from the site of upturning the soil	5.24	1.23	585.17	100	Nos	1486
2	254	Kgs	Cost of Bio Fertilizers including cost of application Vermi-campose 1 kg,Bio fertilizer 100 gms VAM 100 Gms	NHAI ME	-	7.70	1	Kg	1956
3	594000	Ltrs	Cost of water @ 20 liter per seedlings 30 waterig days (990x20x30=1122600 Lts)	NHAI ME	-	1200.00	12000	Lts	59400
4	254	Nos	Watering the plants once in 6 days (excluding rainy days) from April to June & January to March @ one mazdoor for 200 plants/watering day - (15+15 = 30 watering days)	4.11.7		475.75	200	Shift	18126
5	0.01	No	Engaging protection Mazdoor @ 1 Mazdoor (3 months) (25 days/ Month)	FSR wage rate	-	475.75	1	No	357
6	LS		Contingencies and unforseen expenditure to be restricted to as per actuals.			LS		L	675
							Total pr		82000
				-			% of esc		24600
Specifications : Total prorata 2nd year maintenance 106									

The estimate has been prepared based on MTP model estimate, FSR, PWD SSR for the year 2022-23 and the local rate as per model estimate and Research Wing rate.

District Forest Officer, Villupuram Division, Villupuram.

Model estimate for 3rd year maintenance for Compensatory afforestation of 990 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of Seedlings =

254

Survival 100%

= 254

Wage rate = Rs.

475.75

2022-2023

SI. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
1	254	Nos	Scraping for 1m dia and soil working 15cm depth around each plants and removing the grass roots away from the site of upturning the soil	5.24	1.23	585.17	100	Nos	1486
2	254	Kgs	Cost of Bio Fertilizers including cost of application Vermi-campose 1 kg,Bio fertilizer 100 gms VAM 100 Gms	NHAI ME	-	7.70	1	Kg	1956
3	594000	Ltrs	Cost of water @ 20 liter per seedlings 30 waterig days (990x20x30=1122600 Lts)	NHAI ME	-	1200.00	12000	Lts	59400
4	254	Nos	Watering the plants once in 6 days (excluding rainy days) from April to June & January to March @ one mazdoor for 200 plants/watering day - (15+15 = 30 watering days)	4.11.7	0.28	475.75	200	Shift	18126
5	0.01	No	Engaging protection Mazdoor @ 1 Mazdoor (3 months) (25 days/ Month)	FSR wage rate	-	475.75	1	No	357
6	LS		Contingencies and unforseen expenditure to be restricted to as per actuals.	LS				675	
	Total prorata								82000
_	Add 40% of escalation								32800
	Total prorata 3rd year maintenance								114800

Specifications:

The estimate has been prepared based on MTP model estimate, FSR, PWD SSR for the year 2022-23 and the local rate as per model estimate and Research Wing rate.

District Forest Officer, Villupuram Division, Villupuram.

Model estimate for 4th year maintenance for Compensatory afforestation of 990 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of Seedlings = 254 Survival 100% 254

> Wage rate = Rs. 475.75

2022-2023

2022-2023									
Amoun		Per	Rate Rs.	FSL (Man days)	F.S.R. No.	Description of work	у	Qt	SI. No
1486	Nos	100	585.17	1.23	5.24	or 1m dia and soil working 15cm nd each plants and removing oots away from the site of he soil	Nos	254	1
514		LS				cies and unforseen expenditure cted to as per actuals.	3	LS	2
2000	rata	Total prorata							
1000	ation	Add 50% of escalation							
3000	ance	Total prorata 4th year maintenance							
300	Add 10% of escalation for 5th year				Add				
3300	Total prorata for 5th year maintenance				Total prorat				
330			scalation						
3630	nce	Total prorata for 6th year maintenance							
363		Add 10% of escalation for 7th year							
3993	Total prorata for 7th year maintenance								
399		Add 10% of escalation for 8th year							
4392		Total prorata for 8th year maintenance							
439	_		scalation fo						
4832		Total prorata for 9th year maintenance							
483		Add 10% of escalation for 10th year Total prorata for 10th year maintenance							
5315	e	ntenanc	year mair	tor 10th	tai prorata			ifications	Spec

The estimate has been prepared based on MTP model estimate, FSR, PWD SSR for the year 2022-23 and the local rate as per model estimate and Research Wing rate.

8/40

District Forest Officer, Villupuram Division, Villupuram.