

Abstract Model estimate for Raising Compensatory afforestation of 90 plants in degraded forest area during 2022-23 under State CAMPA scheme

No. of seedlings : 99 Nos.
 For 10% casualty replacement : 9 Nos.
 TOTAL 99 Nos

Sl. No.	Description of Work	Proposed estimate cost in Rupees	Remarks
1	2	3	4
1	Raising nursery - 1089 Nos	28000	1000 Nos of seedlins per ha has been proposed
2	Planting operation - 990 seedlings	112000	10% Weightage towards escalation of labour wage rate during 2023-24
3	1 st year Maintenance	86000	20% Weightage towards escalation of labour wage rate during 2024-25
4	2 nd year Maintenance	88400	30% Weightage towards escalation of labour wage rate during 2025-26
3	3 rd year Maintenance	96590	40% Weightage towards escalation of labour wage rate during 2026-27
6	4 th year Maintenance	1500	50% Weightage towards escalation of labour wage rate during 2027-28
7	5 th year Maintenance	1650	60% Weightage towards escalation of labour wage rate during 2028-29
8	6 th year Maintenance	1815	70% Weightage towards escalation of labour wage rate during 2029-30
9	7 th year Maintenance	1997	80% Weightage towards escalation of labour wage rate during 2030-31
10	8 th year Maintenance	2196	90% Weightage towards escalation of labour wage rate during 2031-32
11	9 th year Maintenance	2416	100% Weightage towards escalation of labour wage rate during 2032-33
12	10 th year Maintenance	2657	110% Weightage towards escalation of labour wage rate during 2033-34
TOTAL		425221	

Prorata for 1 ha area

429516.13

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District Forest Officer,
 Villupuram Division,
 Villupuram.

Forest Range Officer
 Ulunthurpet Range
 Ulunthurpet

Estimate for Raising nursery for native tree species for Compensatory afforestation of 90 plants in degraded forest area during 2022-2023 under State CAMPA scheme

Area = Gap planting

Size of Polybags = 13 x 25 x 250g

Seedlings = 90

Transplanting Size of Polybags = 30 x 45 x 600g

No of Seedlings = 90

Proposed Espacement = Gap planting

10% Casualty = 9

Species proposed for planting

Total = 99

Native species like Vembu, Velvel, Nelli, Naval, Vengai, Red Sanders, Iluppai etc.,

Wage rate 2022-2023 = Rs. 475.75

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

SL. No	Qty	Unit	Name of Work	FSR / SSR	FSL	Rate	Per	Amount
PART I - Small size bags.- 13X25 cm.								
1	11	M ²	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	63
2	0.20	Kg	Cost of seeds (2kgs/ 1000 Nos)	LR	--	250.00	1 No	50
3	99	Nos.	Cost of 13x25cmx250G poly bags	Tender rate	--	944.00	1000 No	93
4	0.00	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	0
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	0.08	Cu.m	Collection & supply of sand,silt and red soil according to the requirement for preparation of soil mixture - 3/4th of the total volume (0.84 M3/1000 Nos)	LR	--	750.00	1 Cu.m	60
8	0.03	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	23

Qty	Unit	Name of Work	FSR / SSR	FSL	Rate	Per		Amount	
9	99	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 seedlings (excluding cost of soil mixture and FYM)	4.6.4	4.48	2131.36	1000	Nos	211
10	2	Kgs.	Cost of Vermicasting @ 25 gram per seedlings	As per Research Wing Rate	-	10.00	1	Kg	20
11	1	Kgs.	Cost of VAM @ 10 gram per seedlings		-	18.00	1	Kg	18
12	0	Kg	Cost of Azospirillum @ 5 gram per seedlings	As per Research Wing Rate	-	27.00	1	Kg	0
13	0	Kg	Cost of Phosphobacteria @ 5 gram per seedling		-	27.00	1	Kg	0
14			Watering the container plants with rose cans -						
a	99	Nos.	Twice daily - 15 days	4.10.4	0.23	109.42	1000	Day	162
b	99	Nos.	Once daily - 30 days	4.11.4	0.115	54.71			162
c	99	Nos.	Alternate days spread over 30 days (Effective days-15)		0.115	54.71			81
15	99	Nos.	cost of water for watering the container seedlngs - 60 watering days	4.18 - FSR 1998-99		0.85	1000	day	4
16	99	Nos.	Land rent @ 3000 bags/40 sq.m) - 3 Months	4.17	LR	86.00	40	sq.m/month	179
	27.72	M2/ 3 months							
17	99	Nos.	Shifting the container plants, weeding, grading and replacement of casualties 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	48
SUB - TOTAL (A)									2929
PART II - Bigger size bags: 30x45cmx600g.									
18	99	Nos.	Cost of 30 X 45cm poly bags	Tender rate	--	9263.00	1000	No	917

Qty	Unit	Name of Work	FSR / SSR	FSL	Rate	Per		Amount
19	0.91	M3	LR	-	750.00	1	M3	683
20	0.23	M3		-	750.00	1	M3	173
21	99	Nos.	4.6.7	28.57	13592.18	1000	Nos	1346
22	3	Kgs.	As per Research Wing Rate	-	10.00	1	Kg	30
23	1	Kgs.		-	18.00	1	Kg	18
24	1	Kg	As per Research Wing Rate	-	27.00	1	Kg	27
25	1	Kg		-	27.00	1	Kg	27
26	1	Mazdoors	As per ME of MTP	--	475.75	1	Nos	476
27	99	Nos.	PWD SSR	--	17.50	1	Rm	4331
28	50	Nos.	PWD SSR	--	17.50	1	Rm	875
29	99	Nos.		--	0.40	1	Each/ time	79
30	99	Nos.	ME	--	1.00			198

	Qty	Unit	Name of Work	FSR / SSR	FSL	Rate	Per		Amount
31			Watering the container plants with rose cans						
a	99	Nos.	Twice daily - 15 days	4.10.7	0.56	266.42	1000	Day	396
b	99	Nos.	Once daily - 30 days	4.11.7	0.28	133.21	1000	Shift	396

	Qty	Unit	Name of Work	FSR / SSR	FSL	Rate	Per		Amount
c	99	Nos.	Once in alternate days -spread over 60 days (Effective days-30 days)	4.11.7	0.28	133.21	1000	Shift	396
d	99	Nos.	Twice in a week spread over 105 days (Effective days-30 days)	4.11.7	0.28	133.21	1000	Shift	396
32	99	Nos.	Land rent @ 500 bags/40 sq.m)	4.17	LR	86.00	40	sq.m/month	2503
	166.3	m2/7 months							
33	99	Nos.	Shifting the container plants, weeding, grading and replacement of casualties in the bags - shifting to done once in 21 days- 7 shift	4.15.7	2.69	1279.77	1000	Shift	887
34	99	Nos.	cost of water for watering the container seedlings - 105 watering days	4.18 - FSR 1998-99		1.60	1000	day	17
35	0.01	Nos.	Nursery protection mazdoors 1 No / 100000 Nos of 30 x45cm bags - 300 days. (90d+210d)	As per ME of MTP	1	475.75	1	100000/M	78
36	GST 18% (Item No.3, 17)								182
37	5 Months		Provision for cost of pesticides and fungasides and Labour charges for application of pesticides - 2 times / month	L.R	-	200	1	times	3000
39	L.S		Photo & Documentation etc.,	L.S					4000
39	L.S		Contingencies unforeseen items	L.S					3640
SUB - TOTAL (B)									25072
TOTAL (A + B)									28000

Raising cost for 990 seedlings = 28000

cost for 1 seedlings = **Rs 28.28 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 90 nos of seedlings has been proposed for 0.045 ha @ 1000/ha. with 10% of casualty 9Nos. Totally 99 Nos of seedlings has been proposed.

2) Bio-fertilizers may be applied as per norms prescribed by Research wing.

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.

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District Forest Officer,
Villupuram Division,
Villupuram.

Forest Range Officer
Ulunthurpet Range
Ulunthurpet

Model estimate for Raising nursery for native tree species for Compensatory afforestation of 90 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of seedlings = 90
10% Casualty = 9
Total = 99

Size of Polybags = 30 x 45 x 600g
Wage rate = Rs. 475.75
2022-2023

Sl. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
1	90	Nos	Aligning and Marking in plantation area	5.2.4	1.38	656.54	100	Nos	591
2	90	Nos	Digging of 60 CM ³ pits in all types of soil during non rainy season	5.8.1	9.26	4405.45	100	Nos	3965
3	200	No.	Cost & transport of Farmyard manure each plants 0.60x0.60x0.20=0.072m ³ /pit	Lowest quotation	-	750.00	1	M3	4860
	6	M3							
4	90	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	214
5	90	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	693
6	99		Transporting saplings (transported to the radius of 40 kms) excluding loading and unloading by Private Vehicle	NHAI ME	-	7.00	1	No	693
7	99	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	155
8			Distribution of saplings from where seedlings are stocked to the planting spot in plains upto 500 mts						
a	40	Nos	Upto 100 mts	5.15.1	10.00	4757.50	1000	Nos	188
b	40	Nos	Upto 200 mts	5.15.2	17.50	8325.63	1000	Nos	330
c	20	Nos	Upto 500 mts	5.15.3	41.00	19505.75	1000	Nos	386
9	90	Nos	Planting the container plants by refilling pits of size 60cm.	5.22	1.71	813.53	100	Nos	732
10	454.5	RM	Provision of vertical casurina poles 5cm to 8cm 2.50mtr ht. per plant	PWD SSR		17.50	1	RM	7954
11	9	Nos	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	271
Sl. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount

12	90	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	527
13	90	Nos	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	2929
14	90	Nos	Providing Brush wood fencing around each plants	-	0.25	118.94	1	No	10705
15	90	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	3211
16	567000	Ltrs	Cost of water @ 20 liter per seedlings 15 watering days (1890x20x15=567000 Lts)	NHAI ME		1200.00	12000	Lts	56700
17	0.01	Nos.	Plantation Protection mazdoors from October to March - 180 m.days	Wage rate	1	475.75	1	M. Days	856
18	90	Nos	Removing/scrapping vizal monsoon or bothai grass for one meter dia around the plants	5.27	0.21	99.91	100	Nos	90
19	5	Months	Provision for cost of pesticides and fungasides and Labour charges for application of pesticides - 2 times / month	L.R	-	200	1	times	2000
20	L.S		Photo & Documentation etc.,	LS					2000
21	LS		Contingencies and unforeseen expenditure to be restricted to as per actuals.	LS					1768
TOTAL									101818
Add 10% of escalation									10182
Total prorata									112000

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 90 nos of seedlings has been proposed for 0.045 ha @ 1000/ha. with 10% of casualty 9 Nos. Totally 99 Nos of seedlings has been proposed.

2) Rates for the works in SI No. 2 and 8 have been provided for plains. If the area identified for compensatory 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.

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District Forest Officer,
Villupuram Division,
Villupuram.

Forest Range Officer
Ulunthurpet Range
Ulunthurpet

Model estimate for 1st year maintenance for Compensatory afforestation of 90 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of seedlings planted 90

No of Seedlings for casulty replacement = 9

Size of Polybags = 30 x 45 x 600g

(10% replacement)

Wage rate = Rs. 475.75

Sl. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
A. NURSERY OPERATION									
1	9	No	Raising cost of seedlings in 30x45 size polythene bags (As per nursery estimate)	As per nursery estimate	-	158.09	1	No	1425
TOTAL (A)									1425
B. PLANTING OPERATION									
1	10	No	Cost & transport of Farm yard manure each plants 0.60x0.60x0.20=0.072m3/pit	Lowest	-	750.00	1	m3	486
	1	M3							
2	4.5	Nos.	Application of Farm yard manure by mixing in the pit before planting - 1 mazdoor for 200 Nos	FSL Wages Rate	-	475.75	200	Nos.	11
3	9	Nos.	Transporting saplings (transported in the radius of 40 Kms) excluding loading and unloading in Private vehicle	NHAI ME	-	7.00	1	No.	63
4	9	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	14
5			Distribution of seedlings in the site C.plants upto 500mtrs - in plains						
a	3.6	Nos	Up to 100 m.	5.15.1	10.00	4757.50	1000	Nos	17
b	3.6	Nos	Up to 200 m.	5.15.2	17.50	8325.63	1000	Nos	30
c	1.8	Nos	Up to 500 m.	5.15.2	41.00	19505.75	1000	Nos	35
6	9	Nos	Replacement of casualties by reopening failed pits and planting the seedlings	5.23	5.57	2649.93	100	Nos	238

Sl. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
7	90	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	527
8	90	Nos	Cost of Bio Fertilizers including cost of application Vermi-campose 1 kg,Bio fertilizer 100 gms VAM 100 Gms	NHAI ME	-	7.70	1	No.	693
9	594000	Ltrs	Cost of water @ 20 liter per seedlings 30 watering days (990x20x30=594000 Lts)	NHAI ME	-	1200.00	12000	Lts	59400
10	90	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	6423
11	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 unforeseen expenditure to be restricted to as per actuals.	LS					878
TOTAL (B)									70242
TOTAL (A+B) prorata for 1st year maintenance									71667
Add 20% of escalation for 2nd year									14333
Total prorata									86000

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 Sl 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.

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District Forest Officer,
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Forest Range Officer
Ulunthurpet Range
Ulunthurpet

Model estimate for 2nd year maintenance for Compensatory afforestation of 90 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of Seedlings = 99

Survival 100% = 90

Wage rate = Rs. 475.75

2022-2023

2022-2023

Sl. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
1	99	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	579
2	99	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	762
3	594000	Ltrs	Cost of water @ 20 liter per seedlings 30 waterig days (990x20x30=1122600 Lts)	NHAI ME	-	1200.00	12000	Lts	59400
4	90	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	6423
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 unforeseen expenditure to be restricted to as per actuals.	LS					479
Total prorata									68000
Add 30% of escalation									20400
Total prorata 2nd year maintenance									88400

Specifications :

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.

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District Forest Officer,
Villupuram Division,
Villupuram.

Forest Range Officer
Ulunthurpet Range
Ulunthurpet

Model estimate for 3rd year maintenance for Compensatory afforestation of 90 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of Seedlings = 99
Survival 100% = 90

Wage rate = Rs. 475.75
2022-2023

Sl. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
1	99	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	579
2	99	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	762
3	594000	Ltrs	Cost of water @ 20 liter per seedlings 30 waterig days (990x20x30=1122600 Lts)	NHAI ME	-	1200.00	12000	Lts	59400
4	99	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	7065
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 unforeseen expenditure to be restricted to as per actuals.	LS					830
Total prorata									68993
Add 40% of escalation									27597
Total prorata 3rd year maintenance									96590

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.

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District Forest Officer,
Villupuram Division,
Villupuram.


Forest Range Officer
Ulunthurpet Range
Ulunthurpet

Model estimate for 4th year maintenance for Compensatory afforestation of 90 plants in degraded forest area during 2022-2023 under State CAMPA scheme

No of Seedlings = 99
Survival 100% 90

Wage rate = Rs. 475.75
2022-2023

Sl. No	Qty		Description of work	F.S.R. No.	FSL (Man days)	Rate Rs.	Per		Amount
1	99	Nos	Scrapping 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	579
2	LS		Contingencies and unforeseen expenditure to be restricted to as per actuals.	LS					421
Total prorata									1000
Add 50% of escalation									500
Total prorata 4th year maintenance									1500
Add 10% of escalation for 5th year									150
Total prorata for 5th year maintenance									1650
Add 10% of escalation for 6th year									165
Total prorata for 6th year maintenance									1815
Add 10% of escalation for 7th year									182
Total prorata for 7th year maintenance									1997
Add 10% of escalation for 8th year									200
Total prorata for 8th year maintenance									2196
Add 10% of escalation for 9th year									220
Total prorata for 9th year maintenance									2416
Add 10% of escalation for 10th year									242
Total prorata for 10th year maintenance									2657

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.

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District Forest Officer,
Villupuram Division,
Villupuram.

Forest Range Officer
Ulunthurpet Range
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