



COMPENSATORY AFFORESTATION SCHEME

Model estimate for Compensatory Afforestation scheme for Taller Saplings in 30X45 cm poly bags over an extent of 1.00ha. degraded Reserved Forest of Gummanur RF in Palacode Range including 10 years maintenance in Dharmapuri Forest Division.

Sl. No.	Details of work	Year	Unit	Rate per unit	Amount proposed
1	Raising nursery for taller saplings (30x45) @ 1000 Nos. per ha. for 1.00ha.	2023-2024	1.00 ha.	1,63,350	1,63,350.00
2	Planting taller saplings @ 1000Nos. per ha. for 1.00ha	2024-2025	1.00 ha.	3,01,884	3,01,884.00
3	1 st year maintenance	2025-2026	1.00 ha.	2,16,687	2,16,687.00
4	2 nd year maintenance	2026-2027	1.00 ha.	2,38,356	2,38,356.00
5	3 rd year maintenance (10% of the planting cost)	2027-2028	1.00 ha.	--	46,523.00
6	4 th year maintenance (taller seedlings) (Add 10% cost escalation in the previous year maintenance cost)	2028-2029	1.00 ha.	--	51,175.00
7	5 th year maintenance (taller seedlings) (Add 10% cost escalation in the previous year maintenance cost)	2029-2030	1.00 ha.	--	56,293.00
8	6 th year maintenance (taller seedlings) (Add 10% cost escalation in the previous year maintenance cost)	2030-2031	1.00 ha.	--	61,922.00
9	7 th year maintenance (taller seedlings) (Add 10% cost escalation in the previous year maintenance cost)	2031-2032	1.00 ha.	--	68,114.00
10	8 th year maintenance (taller seedlings) (Add 10% cost escalation in the previous year maintenance cost)	2032-2033	1.00 ha.	--	74,925.00
11	9 th year maintenance (taller seedlings) (Add 10% cost escalation in the previous year maintenance cost)	2033-2034	1.00 ha.	--	82,418.00

Sl. No.	Details of work	Year	Unit	Rate per unit	Amount proposed
12	10 th year maintenance (taller seedlings) (Add10% cost escalation in the previous year maintenance cost)	2034-2035	1.00 ha.	--	90,660.00
13	Chain link fencing around plantation to prevent biotic pressure @ 400 RM per ha at the rate of Rs.2500 per RM.	--	400 RM	2,500	10,00,000.00
14	Engaging protection mazdoor @ 30 mandays per month for 10 years.	10 years	As per separate calculation sheet		38,69,640.00
	Total cost required for compensatory afforestation in 1.00ha.				63,21,947.00 (or) 63,22,000.00


 District Forest Officer (I/C),
 Dharmapuri Forest Division,
 Dharmapuri.


 09/12/2021

Model estimate for Compensatory Afforestation scheme for Taller Saplings in 30X45 cm poly bags over an extent of 1.00ha. degraded Reserved Forest of Gummanur RF in Palacode Range including 10 years maintenance in Dharmapuri Forest Division.

Period of nursery	: 10 months	No. of saplings to be raised for 10ha @ 1000 saplings per ha	: 10000
Size of poly bags	: 30 x 45cm x 450g	Add 10% extra for casualties	: 1000
Total			: 11000

Nursery Location : Palacode Labour rate for 2021-2022 : 460.25

Sl. No.	Qty.	Description of work	FSR. item No.	FSL	Rate per unit		Amount
1	11000 Nos	Cost of Polythene bags 30x45cmx600G (Rs.5605 + 18% GST + Add 10% cost escalation for 2020-2021)	As per tender rate 2021-2022		7,275	1,000 No	80,028.00
2	1.10 M ³	Formation of germination bed of size 10mx1mx0.30m by heaping the soil (1100 / 10000 = 0.11 or 1 Bed)	PWD SSR 2021-2022 (Item No.62)		64	1 M ³	70.00
3	1650 M ²	Preparation of nursery site by clearing and leveling the site for forming standard beds of 10m x 1m size. (1500sqm. For 10000 Nos.)	4.1	2.42	1,113.81	200 M ²	9,189.00
4	22.00 Kg	Cost of seeds (20kg for 10000 Nos)	LR		250	1 kg	5,500.00
5	1 Bed 15 days	Watering the germination beds twice daily with the rose can for 15 days. (10000 seedlings per bed)	4.5.1	0.82	377.41	10 Bed / day	566.00
6	1 Bed 15 days	Watering the germination beds once daily with the rose can for 15 days.	4.5.2	0.41	188.70	10 Bed / day	283.00
7	101.53 M ³	Collection and supply of sand, silt and red soil according to the requirement for preparation of soil mixture - 4/5th of the total volume.	LR		750	1 M3	76,148.00
8	25.41 M3	Cost and transport of Farm Yard Mannure for filling in polythene bags - 1/5th of the total volume.	LR		1,500	1 M3	38,115.00

Sl. No.	Qty.	Description of work	FSR. item No.	FSL	Rate per unit		Amount
9	11000 Nos	Preparation of soil mixture by breaking clods, sieving & mixing with red soil, silt and sand etc according to requirements and farmyard manure in the ratio 4:1 heaping at the filling site and filling in polythene bags and arranging bags in beds and pricking out the seedlings (excluding cost of soil mixture and FYM)	4.6.7	28.57	13,149	1,000 Nos	1,44,643.00
10	385 kgs.	Cost of Vermicasting @ 35 gms/seedlings	As per Research wing rate		10	1 kg	3,850.00
11	165 kgs.	Cost of VAM @ 15gms/seedlings			18	1 kg	2,970.00
12	66 kgs.	Cost of Azospirillum @ 6gms/seedlings			27	1 kg	1,782.00
13	66 kgs.	Cost of Phosphobacteria @ 6gms/seedlings			27	1 kg	1,782.00
14	11000 Nos	Cost of vertical sticks of size 2.50m height.	As per PCCF C.No.TS3 / 33950 / 2013 dated 12-06-2015		15	1 No.	1,65,000.00
15	5500 Nos	Cost of horizontal sticks.			5	1 No.	27,500.00
16	11000 Nos 2 time	Tying plants to the vertical stick once in a month - 2 times..			1.00	1 time	22,000.00
17	11000 Nos 2 time	Pruning side branches once in 2 month - 2 times.			1	1 time	22,000.00
18		Watering the container plants with rose can. (Watering regime as per the NHAI ME approved in PCCF's Ref.No. J1 / 57395 / 2003, dated : 12.12.2003)					
	11000 Nos / 60 days	a) Twice daily - 60 days.	4.10.7	0.56	258	1,000 Nos/day	1,70,108.00
	11000 Nos / 210 days	b) Once daily - 210 days.	4.11.7	0.28	129	1,000 Nos/day	2,97,690.00
19	11000 Nos 6 Shift	Shifting the container once in 21 days first shift is after 45 days from the date of pricking out - 6 times.	4.15.7	2.69	1,238	1,000 Nos/Shift	81,713.00

Sl. No.	Qty.	Description of work	FSR. item No.	FSL	Rate per unit		Amount
20	11000 Nos 270 days	Cost of water for watering the container seedlings from the private wells - 270 days.			22.00	1,000 Nos	65,340.00
21	1650.00 Sq.m 10 M	Land rent nursery in private lands for 10 months.	4.17 (FSR 1998 - 1999)		86.00	40 Sq.m / M	35,475.00
22	0.55 Nos 300 MD	Nursery Protection mazdoor 1No. / 20000Nos. of 30x45cm bags - 300 days	Wages rate	0.5	460.25	1 Nos /MD	75,941.00
23	LS	Contingencies for application of pesticides and panchagavya, providing nursery name board etc., and unforeseen items of works if any.				LS	22,307.00
Total cost for raising nursery per 10.00 ha during 2021-2022							13,50,000.00

COST CALCULATION FOR RAISING NURSERY

2	Total cost for raising nursery per 1.00ha during 2021-2022	1,35,000.00
3	Total cost for raising nursery per 1.00ha during 2022-2022 (including 10% cost escalation)	1,48,500.00
3	Total cost for raising nursery per 1.00ha during 2023-2024 (including 10% cost escalation)	1,63,350.00

Specifications :

This estimate is prepared based on the Model Estimate 2021-2022 for Compensation Afforestation plantations communicated by the Principal Chief Conservator of Forests, Chennai C.No.TS3 / 33950 / 2013, dated 12-06-2015 and also as per 2018-2019 FSR communicated by the Chief Conservator of Forests, Dharmapuri circle vide Ref. No. 3734 / 2018 / D, dated 07-05-2018.

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BAK
09/12/2021

Model estimate for planting the taller saplings (30x45 cm size poly bags) for Compensatory Afforestation over an area of 10.00ha. in the degraded forest areas during 2021-2022.

Size of poly bags : 30 x 45cm x 600G

Compensatory Afforestation area in ha : 10

No. of seedlings to be planted per ha : 1,000

Total No. of seedlings to be planted : 10,000

Add extra 10% for casualties : 1,000

Total No. of seedlings raised : **11,000**

Wages Rate for 2021-2022 Rs. 460.25

Sl. No.	Quantity	Description of works	FSR item No.	FSL	Rate	Per	Amount
1	10000 Nos	Digging of 60 cm ³ pits in all types of soils during rainy season.	5.8.1	7.72	3,553.13	100 Nos	3,55,313.00
2	5000 kg.	Cost and transport of poultry manure @ 500g per plant.	L.R. and As per ME		5,000.00	1,000 kg.	25,000.00
3	10000 Nos	Application of poultry manure @ 500g per plant by mixing in the pit before planting - @ 1 Mazdoor for 200 plant.	L.R. and As per ME		460.25	200 Nos.	23,013.00
4	10000 Nos.	Cost of biofertilizer including cost of application (Vermicompost-1kg, Bio-fertilizer-100gand VAM-100g).	NHAI ME		10	1 No.	1,00,000.00
5	11000 Nos.	Transporting of container saplings to the radius of 40km excluding loading and unloading.	NHAI ME		10	1 No.	1,10,000.00
6	11000 Nos	Loading & unloading the polythene container seedlings (30x45cm) in private / department vehicles (excluding hire charges).	5.11.7	3.29	1,514	1,000 Nos	16,656.00
7	11000 Nos	Transporting of (30x45cm) polythene container seedlings by head loads upto 500m in hills / hillocks.	5.13.2 (i)	34.00	15,649	1,000 Nos	1,72,134.00
8	11000 Nos	Distribution of polythene container saplings from where seedlings are stacked to the planting spot upto 500m in hills / hillocks.	5.15.3	52.50	24,163	1,000 Nos	2,65,794.00

Sl. No.	Quantity	Description of works	FSR item No.	FSL	Rate	Per	Amount
9	10000 Nos	Planting the container plants by refilling pits of 60cm3 size in plains and hillocks.	5.22	1.71	787	100 Nos	78,703.00
10	1000 Nos	Replacement of casualties by reopening failed pits of 60cm3 pits and planting the container plants by refilling pits of size 60cm3 (1/2 pitting rate + full planting rate).	5.23	5.57	2,564	100 Nos	25,636.00
11	10000 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	566	100 Nos	56,611.00
12	10000 Nos	Forming semi circular bunds to the plants in the hillocks by collecting the stones and earth from the area and forming revetment on the lower side with stones and earth heaped and giving inward sloper.	5.25	2.88	1,326	100 Nos	1,32,552.00
13	10000 Nos	Forming catch water drains for each plant of size 0.90 x 0.45 x 0.30m in hillocks and hard gravelly soil.	5.26	6.84	3,148	100 Nos	3,14,811.00
14	10000 Nos 15 days	Watering the plants once in 6 days during summer / non-rainy period from January to March @ 1 Mazdoor for 200 plants / watering day - 15 watering days.	NHAI ME		460	200 Nos	3,45,188.00
15	1200000 litre	Cost of water 20 litre per seedlings from January to March - 15 watering days @ the rate once in 6 days = 20x4000x15 = 120000 litre.	NHAI ME		1,200	12,000 litre	1,20,000.00
16	180 MD	Engaging protection mazdoor - 1 mazdor from October to March.	Wages rate		460	1 MD	82,845.00
17	2 Nos.	Erection of name boards	LR		5,000	1 No.	10,000.00

Sl. No.	Quantity	Description of works	FSR item No.	FSL	Rate	Per	Amount
18	1500 m	Scraping annually fireline to a width of 6m in hill areas.	2.2.1	30	13,807.50	1,000 m	20,711.00
19	LS	Contingencies to meet out unforeseen items of works such as Documentation charges & Erection of Information Board etc. complete .	LS				13,129.00
Total cost for planting taller saplings in 10.00 ha. during 2021-2022							22,68,096.00

1	Rate per ha. for 2021-2022	: Rs. 2,26,809.60
2	Rate per ha. for 2022-2023 including 10% cost escalation	: Rs. 2,49,491.00
3	Rate per ha. for 2023-2024 including 10% cost escalation	: Rs. 2,74,440.00
4	Rate per ha. for 2024-2025 including 10% cost escalation	: Rs. 3,01,884.00

Specifications :

This estimate is prepared based on the Model Estimate 2015-2016 for Compensation Afforestation plantations communicated by the Principal Chief Conservator of Forests, Chennai C.No.TS3 / 33950 / 2013, dated 12-06-2015 and also as per 2018-2019 FSR communicated by the Chief Conservator of Forests, Dharmapuri circle vide Ref.No.3734 / 2018 / D, dated 07-05-2018.

Tc. Tc. [Signature]
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09/12/2021

**Model estimate for I & II year maintenance of planted saplings over an area of 10 ha. of
Compensatory Afforestation plantation during 2021-2022.**

Size of poly bags : 30 x 45cm x 600G Total No. of seedlings planted : 10000

Seedlings planted for 1st year maint. 1000

Wages Rate for 2021-2022 Rs. 460.25

Sl. No.	Quantity	Description of works	FSR item No.	FSL	Rate	Per	Amount
1	1000 Nos	Cost for raising taller saplings in 30x45x600G poly bags.	ME		16.34	1 No.	16,335.00
2	500 kg.	Cost and transport of poultry manure @ 500g per plant.	L.R. and As per ME		5000.00	1000 kg.	2,500.00
3	1000 Nos	Application of poultry manure @ 500g per plant by mixing in the pit before planting - @ 1 Mazdoor for 200 plant.	L.R. and As per ME		460.25	200 Nos.	2,301.00
4	1000 Nos.	Cost of Bio-fertilizer including cost of application (Vermicompost-1kg, Bio-fertilizer-100g and VAM-100g).	NHAI ME		10.00	1 No.	10,000.00
5	1000 Nos.	Transporting of container saplings to the radius of 40km excluding loading and unloading.	NHAI ME		10.00	1 No.	10,000.00
6	1000 Nos	Loading & unloading the polythene container seedlings (30x45cm) in private / department vehicles (excluding hire charges).	5.11.7	3.29	1514.22	1000 Nos	1,514.00
7	1000 Nos	Transporting of (30x45cm) polythene container seedlings by head loads upto 500m in hills / hillocks.	5.13.2 (i)	34.00	15648.50	1000 Nos	15,649.00
8	1000 Nos	Distribution of polythene container saplings from where seedlings are stacked to the planting spot upto 500m in hills / hillocks.	5.15.3	52.50	24163.13	1000 Nos	24,163.00

9	1000 Nos	Replacement of casualties by reopening failed pits of 60cm3 pits and planting the container plants by refilling pits of size 60cm3 (1/2 pitting rate + full planting rate).	5.23	5.57	2563.59	100 Nos	25,635.00
10	10000 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	566.11	100 Nos	56,611.00
11	10000 Nos 30 days	Watering the plants once in 6 days during summer / non-rainy period from January to March @ 1 Mazdoor for 200 plants / watering day - 30 watering days,	NHAI ME		460.25	200 Nos	6,90,375.00
12	60,00,000 litre	Cost of water 20 litre per seedlings once in 6 days from January to March (20lit x 10000 seedlings x 30 days = 60,00,000 litre.	NHAI ME		1200.00	12000 litre	6,00,000.00
13	1500 m	Scraping annually fire line to a width of 6m in hill areas.	2.2.1	30.00	13807.50	1000 m	20,711.00
14	LS	Contingencies to meet out unforeseen items of works such as Documentation charges & Erection of Information Board etc. complete .	LS				4,205.00
Total cost for first year maintenance in 10.00 ha. during 2021-2022							14,80,000.00

ABSTRACT

1	Rate per ha. for 2021-2022	Rs. 1,48,000
2	Rate per ha. for 2022-2023 including 10% cost escalation	Rs. 1,62,800
3	Rate per ha. for 2023-2024 including 10% cost escalation	Rs. 1,79,080
3	Rate per ha. for 2024-2025 including 10% cost escalation	Rs. 1,96,988

4

1st year maintenance

Rate per ha. for 2025-2026 including 10% cost escalation in the previous year rate

Rs. 2,16,687

5

2nd year maintenance

Rate per ha. for 2026-2027 including 10% cost escalation in the previous year rate

Rs. 2,38,356**Specifications :**

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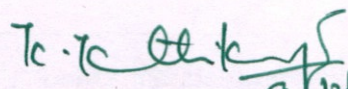
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
Calulation Sheet for engaging protection Mazdoors for Compensatory Afforestation Land for Seven years

Labour Rate for 2021-2022	Rs.	460.25
Labour Rate 2022-2023 including 10% cost escalation	Rs.	506.00
Labour Rate 2023-2024 including 10% cost escalation	Rs.	557.00
Labour Rate 2024-2025 including 10% cost escalation	Rs.	613.00
Labour Rate 2025-2026 including 10% cost escalation	Rs.	674.00

Sl. No.	Details of work	Year	No. of Man days	Rate per Man days	Amount proposed
Engaging protection mazdoor 1 Nos per month for 2024-2025 @ 30 andays per month for 1No. (1 Nos. x 12 months x 30 mandays = 360 mandays)					
1	First year (Adding 10% cost escalation in the previous year maintenance cost)	2025-2026	360 MD	674.00	2,42,640.00
2	Second year (Adding 10% cost escalation in the previous year maintenance cost)	2026-2027	360 MD	741.00	2,66,760.00
3	Thired year (Adding 10% cost escalation in the previous year maintenance cost)	2027-2028	360 MD	815.00	2,93,400.00
4	Forth year (Adding 10% cost escalation in the previous year maintenance cost)	2028-2029	360 MD	897.00	3,22,920.00
5	Fifth year (Adding 10% cost escalation in the previous year maintenance cost)	2029-2030	360 MD	987.00	3,55,320.00
6	Sixth year (Adding 10% cost escalation in the previous year maintenance cost)	2030-2031	360 MD	1086.00	3,90,960.00
7	Seventh year (Adding 10% cost escalation in the previous year maintenance cost)	2031-2032	360 MD	1195.00	4,30,200.00

Sl. No.	Details of work	Year	No. of Man days	Rate per Man days	Amount proposed
8	Eighth year (Adding 10% cost escalation in the previous year maintenance cost)	2032-2033	360 MD	1315.00	4,73,400.00
9	Nineth year (Adding 10% cost escalation in the previous year maintenance cost)	2033-2034	360 MD	1447.00	5,20,920.00
10	Tenth year (Adding 10% cost escalation in the previous year maintenance cost)	2034-2035	360 MD	1592.00	5,73,120.00
Total cost required for engaging protection Mazdoor for 10 years					38,69,640.00


 District Forest Officer (MC),
 Dharmapuri Forest Division,
 Dharmapuri.


 09/12/2021