

Annexure – III

SCHEME FOR COMPENSATORY AFFORESTATION

Detail scheme for Compensatory Afforestation to be carried out in lieu of **6.76 ha** Unclassed Private forests, area to be diverted for Approach road in East Jaintia Hills District by M/s Green Valley Industries Ltd.

1. Detail of Forest land:-

District: - West Hills District

Village:-Nongumiang.

Block: - Nongstoin.

Name of Division: - Khasi Hills Wildlife Division.

Range: - Nongstoin.

Area to be afforested: - 6.76 Ha

2. Description of Area:-

1. The site identified for Compensatory Afforestation is a Non-forest area.
2. In case of non- forest area identified for Compensatory Afforestation, then what is the distance of Compensatory Afforestation site from the adjoining forest boundary:- **Border to Nongumiang Reserved Forests.**
3. Soil type: - Laterite.
4. Topography: - Undulating.
5. Slope: - Medium to Gentle.

3. Plantation Model and technical details:-

Area of Compensatory Afforestation: 6.76 Ha

1. **Species to be planted:** Mixed plantation of species like *Michelia champaca*, *Gmelina arborea*, *Ex-bucklandia populnea*, *Chukrasia tabularis*, *Artocarpus spp.*, *Alnus nepalensis*, *Bombax ceiba*, *Ailanthus exelsa* etc.

2. **Method of Planting:** Planting of nursery raised seedlings in pre- dug pits of size 0.30 m x 0.30 m x 0.30 m
3. **Spacing:** 2.00 m x 2.00 m
4. **Number of Seedlings to be planted per Hectare:** 2,500 seedlings per hectare.
5. **Number of seedlings to be raised in nursery per hectare keeping in view in nursery- mortality – cum- culling, transit mortality and plantation site mortality @ 15 %, 5 % & 20 % respectively:**
2500 + additional 40% = 3,500 seedlings per hectare.
6. **Number of seedlings to be raised for plantation over** 6.76 hectares = 6.76 ha. x 3,500 = 23660 Nos; @ 1000 seedlings per bed = Approx. 24 nursery beds.
7. **Time Schedule:** Nursery work to be initiated in the month of June following the receipt of fund from the user agency and the advance earth work for raising of plantation are to be initiated from the month of December in the same year in which nursery work has been carried out.

A. Nurseries

- (i) **Number of Seedlings to be raised:** 23660 polythene pot seedlings.
- (i) **Basis For Cost Estimates:** Cost Norms for raising Plantations and Nurseries etc. as approved vide Government of Meghalaya, as notified by the Labour Department vide No. LBG. 75/2012/187, dated 11.06.2014. (Wage rate @ Rs. 160 per man days.

NORMS FOR THE CREATION OF NURSERY (COST NORMS FOR ONE NURSERY BED):- POLYPOT PERMANENT NURSERY

- (ii) **Cost Estimates for the First Year:**

Sl. No.	Items of works	Qty	Man days	Rate (Rs)	Amount (Rs.)
1.	2	3	4	5	6
1.	Preparation of standard-sized beds (13m x 1.3x 0.30m) for placing the polythene bags.	1	1.5	240	240.00
2.	Costs of polythene bags (22.5cm x 15mm) in one bed 4 kgs are required.	1	7.2	1152	1152.00
3.	Cost of filling up of manure-mixed earth in poly bags including pounding after filling.	1	9	1440	1440.00

Sl. No.	Items of works	Qty	Man days	Rate (Rs)	Amount (Rs.)
1.	2	3	4	5	6
4.	Cost of cow dung including transportation	1	0.6	96	96.00
5.	Cost of seeds	1	1.5	240	240.00
6.	Cost of Goat proof fencing net including cost of wooden fencing posts, erecting fixing fitting etc. complete & including cost of staples.	1	1	160	160.00
7	Cost of sowing including hoeing, mulching etc.	1	1	160	160.00
8.	Cost of pricking and transplanting of seedlings from germination beds to poly bags.	1	2	320	320.00
9.	Cost of construction of shades for protection of seedlings from frost during winter and direct sunlight in warm areas.				
	(a) Cost of materials	1	1	160	160.00
	(b) Labour cost	1	2	320	320.00
10.	Cost of weeding 4 weeding @ 32.50/weeding	1	2.6	416	416.00
11.	Cost of watering	1	1	160	160.00
12.	Miscellaneous cost e.g. Fungicides tools & plants, making of inspection path, fertilizers, chemicals, lime pesticides/insecticides, growth hormones, etc.	1	0.2	160	32.00
Total in the First Year			30.6		4896.00

Note:- Sl. Nos. 1,2,3,4,5 & 6 are preliminary works. Sl. Nos 7,8,9,10 & 11 are creation and maintenance in the first year.

Therefore, the total cost for 34 beds in the first year = 34 x 4896 = Rs. 1,66,464

(iv) Cost Estimates for Maintenance during the Second Year:

Sl. No.	Items of works	Qty (Nursery bed)	Man days	Rate (Rs)	Amount (Rs.)
1.	2	3	4	5	6
1.	Weeding – 3 times @ 32.50/ per weeding.	1	1.9	304	304.00
2.	Watering	1	0.5	80	80.00
Total in the Second Year			2.4		384.00

Therefore, the total cost for 163 beds in the second year = $34 \times 384 =$ Rs. 13056

ABSTRACT

Year	Estimated Cost (Rs.)
First Year	1,66,464
Second Year	13,056
Total Cost For Nursery	1,79,520

UNIFIED NORMS FOR THE CREATION OF PLANTATION OUTSIDE RESERVE FOREST AND PROTECTED FOREST

(Rate of wages fixed by Labour department= Rs. 160.00)

B. Plantation

(ii) **Area of Plantation:** 6.76 hectares

(iii) **Basis For Cost Estimates:** Cost Norms for raising Plantations and Nurseries etc. as approved vide Government of Meghalaya, as notified by the Labour Department vide No. LBG. 75/2012/187, dated 11.06.2014.

(iv) **Detailed Year-wise Cost Estimates:**

Preliminary Works:

Sl. No.	Items of works	Qty. (Ha)	Man days	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Survey and demarcation including fixing of boundary marks at strategic points.	1	2	320	320.00
2.	Jungle clearance, burning, land preparation including staking, pit digging, hoeing etc.	1	24	3840	3840.00
3	Fencing:- With 3 strand barbed wire and wooden fencing posts including cost of staples, fixing, fitting etc complete.	1	64	10240	10240.00
4.	Cost of collection of seeds	1	5	800	800.00
5.	Construction of camp hut and inspection path	1	4	640	640.00
6.	Purchase of tools and plants (Lumpsum)	1	2	320	150.00
7.	Supervisory staffs to be engaged on casual basis from amongst the local people	1	12	1920	1920.00
Total cost in the preliminary year		1	113	17760	18080.00
Total Cost For Preliminary Year					

Therefore, the total cost in the preliminary year for the plantation of 6.76 ha = 6.76 Ha x Rs. 18080 = Rs. 1, 22,220.8

Creation – (First Year of Plantation):

Sl. No.	Items of works	Qty.	Man days	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1	<p>Creation of plantation:</p> <p>Planting of nursery raised seedlings including carriage from nursery centers to plantation sites and proper ramming after planting etc. complete (for plantation raised by nursery seedlings only)</p>	1	16	2560	2560.00
2.	Three (3) weedings	1	45 (@ 15 mandays per weeding)	7200	7200.00
3.	<p>Fire protection during dry and windy season:</p> <p>(i) Wages of fire watchers from November of creation year to April of the following year.</p> <p>(ii) Fireline clearance :- internal and external fireline including controlled burning</p>	1	10 10	1600 1600	3200.00
Total Cost for the First Year			81	12960	12960.00

Therefore, the total cost in the first year of the plantation of 6.76 ha = 6.76 x Rs. 12960= Rs. 87,609.6

Second Year of Plantation:

Sl. No.	Items of works	Qty. (Ha)	Mandays	Rate (Rs.)	Total Amount (Rs.)
1.	2	3	4	5	6
1	Three (3) weedings	1	45 (@ 15 mandays per weeding)	7200	7200.00
2.	Fire Protection Works: (i) Fire line clearance including controlled burning (iii) Wages of fire watchers from November of the creation year to April of the following year.	1	10 10	1600 1600	3200.00
3.	Vacancy filling in mortality areas	1	4	640	640.00
Total cost for the Second Year			69	11040	11040.00

Therefore, the total cost in the second year of the plantation of 6.76 ha = 6.76 x Rs. 11,040= Rs. 74,630.4

Third Year of Plantation:

Sl. No.	Items of works	Qty.	Unit (Mandays)	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1	Two (2) weedings	1	30 (@15 mandays per weeding)	4800	4800.00

2.	Fire Protection Works.				
	(i) Fire line clearance including controlled burning	1	10	1600	1600.00
	(iv) Wages of fire watchers from November of the creation year to April of the following year.	1	10	1600	1600.00
3.	Vacancy filling in mortality areas	1	4	640	640.00
4.	Miscellaneous cost e.g. repair of fencing and maintenance of inspection path etc.	1	4	640	640.00
Total Cost for the Third Year			58	9280	9280.00

Therefore, the total cost in the third year of the plantation of 6.76 ha = 6.76 ha x Rs. 9280= Rs. 62,732.8

Fourth Year of Plantation:

Sl. No.	Items of works	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Fire Protection Works	1			
	(i) Wages of fire watchers		10	1600.00	
	(ii) Fire line clearance including controlled burning		10	1600.00	3200.00
2.	One weeding in areas where there is heavy growth of weeds/jungles	1	15	2400.00	2400.00
Total Cost for the Fourth Year			35	5600	5600.00

Therefore, the total cost in the fourth year of the plantation of 6.76 ha = 6.76 ha x Rs. 5600= Rs. 37,856

Fifth Year of Plantation:

Sl. No.	Items of works	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Fire Protection Works (Last fire protection)				
	(i) Wages of fire watchers	1	10	1600	3200.00
	(ii) Fire line clearance including controlled burning	1	10	1600	
2	Cost of singling out operation to provide proper spacing from one plant to another.	1	6	960	960.00
3.	One weeding	1	15	2400	2400.00
4.	Miscellaneous expenditure e.g. salvaging of fencing materials from the plantation centre wherever fencing is no longer necessary	1	3	480	480.00
Total Cost for the Fifth Year			44	7040	7040.00

Therefore, the total cost in the fifth year of the plantation of 6.76 ha = 6.76 ha x Rs.7040= Rs. 47590.4

Sixth Year of Plantation:

Sl. No.	Items of works	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Fire Protection Works (Last fire protection)				
	(i) Wages of fire watchers	1	10	1600	3200.00
	(ii) Fire line clearance including controlled burning	1	10	1600	

2	Cost of singling out operation to provide proper spacing from one plant to another.	1	6	960	960.00
3.	One weeding	1	15	2400	2400.00
Total Cost for the Sixth Year			41	6560	6560.00

Therefore, the total cost in the Sixth year of the plantation of 6.76 ha = 6.76 ha x Rs.6560 =Rs. 44,345.6

Seventh Year of Plantation:

Sl. No.	Items of works	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Fire Protection Works (Last fire protection)				
	(i) Wages of fire watchers	1	10	1600	3200.00
	(ii) Fire line clearance including controlled burning	1	10	1600	
Total Cost for the Seventh Year			20	3200	3200.00

Therefore, the total cost in the Seventh year of the plantation of 6.76 ha = 6.76 ha x Rs. 3,200 = Rs.21,632

Eight Year of Plantation:

Sl. No.	Items of works	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Fire Protection Works (Last fire protection)				
	(i) Wages of fire watchers	1	10	1600	3200.00
	(ii) Fire line clearance including controlled burning	1	10	1600	

Total Cost for the Eight Year		20	3200	3200.00

Therefore, the total cost in the Eight year of the plantation of 6.76 ha = 6.76 ha x Rs. 3,200 = Rs. 21,632

Nine Year of Plantation:

Sl. No.	Items of works	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Fire Protection Works (Last fire protection)				
	i. Wages of fire watchers	1	10	1600	2000.00
	ii. Fire line clearance including controlled burning	1	10	1600	
Total Cost for the Nine Year			20	3200	3200.00

Therefore, the total cost in the Nine year of the plantation of 6.76 ha = 6.76 ha x Rs. 3200 = Rs 21,632

Tenth Year of Plantation:

Sl. No.	Items of works	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1.	2	3	4	5	6
1.	Fire Protection Works (Last fire protection)				
	(i) Wages of fire watchers	1	10	1600	3200.00
	(ii) Fire line clearance including controlled burning	1	10	1600	
Total Cost for the Tenth Year			20	3200	3200.00

Therefore, the total cost in the Tenth year of the plantation of 6.76 ha = 6.76 ha x Rs. 3200 = Rs. 21,632

ABSTRACT COST INVOLVED

Year	Estimated Cost (Rupees)		
	Plantation	Nursery	Total
Preliminary Year	1,22,220.8	1,66,464	2,88,684.8
First Year	87,609.6	13056	1,00,665.6
Second Year	74,630.4	-	74,630.4
Third Year	62,732.8	-	62,732.8
Fourth Year	37856	-	37856
Fifth Year	47,590.4	-	47,590.4
Sixth Year	44,345.5	-	44,345.5
Seventh Year	21632	-	21632
Eight Year	21632	-	21632
Nine Year	21632	-	21632
Tenth Year	21632	-	21632
TOTAL	563513	179520	7,43,033
Departmental Cost (@15%)			1,11,454.95

Contingency (5%)			37,151.65
Increase in wages (10%)			74,303.3
Grand Total			9,65,943

(Rupees Nine Lakhs sixty five Thousand nine hundred forty three) only

Sd/-

Divisional Forest Officer
Jaintia Hills Territorial Division Jowai