

कार्यालय प्रधान मुख्य वन संरक्षक, (हॉफ), राजस्थान, जयपुर

क्रमांक एफ 3(13)प्रमुवसं/ट्री/तक0/23-24/ 189-905 दिनांक:- 02.05.2025
निमित्त,

- 1-परियोजना निदेशक, आर.एफ.बी.पी. जयपुर।
- 2-परियोजना निदेशक, आर.एफ.बी.डी.पी. जयपुर।
- 3- समस्त सम्भागीय मुख्य वन संरक्षक जयपुर/अजमेर/भरतपुर/कोटा/
उदयपुर/बीकानेर/जोधपुर/(वन्यजीव) जयपुर/कोटा/उदयपुर/
सवाईमाधोपुर/सरिस्का/जोधपुर/विभागीय कार्य जयपुर

विषय:-नवीन मॉडल कॉस्ट नोर्म्स न्यूनतम श्रमिक दर रु. 285/एवं सामग्री दर
2024

महोदय,

उपरोक्त विषयान्तर्गत निवेदन है कि श्रमिक दर 285/रूपये प्रति दिन के आधार पर प्राप्त हुए वृक्षारोपण मॉडल राज्य स्तरीय मॉडल कमेटी की अनुशंसा पर प्रधान मुख्य वन संरक्षक, (हॉफ) राजस्थान, जयपुर के अनुमोदन उपरान्त संलग्न कर आवश्यक कार्यवाही हेतु प्रेषित किये जा रहे हैं:-

(A) Model Cost Norms For Grassland Development-5 Ha

(B) Model Cost Norms For Plantation Along NHAI Sites (Barbed Wire Fencing Model)

(C) Model Cost Norms For Plantation of NHAI Sites (TREE GUARD MODEL)

उक्त सभी मॉडल विभागीय वेबसाइट के निम्न लिंक पर उपलब्ध है।

<http://www.forest.rajasthan.gov.in/content/raj/forest/en/forest,-department/departmental-wings/forest-development/model-for-developmental-activities.htm>

संलग्न-मॉडल की प्रति।

भवदीय

(एस.आर.वी.मूर्थी)

मुख्य वन संरक्षक (आयोजना)
राजस्थान, जयपुर।

कार्यालय प्रधान मुख्य वन संरक्षक, (हॉफ), राजस्थान, जयपुर

क्रमांक:एफ 3(13)प्रमुवसं/ट्री/तक0/25-26/

दिनांक:-

बैठक कार्यवाही विवरण

इस कार्यालय के समसंख्यक पत्रांक एफ 3(13) प्रमुवसं/ट्री/तक0/ 2023-24 राजकाज रेफ. नं. 14669643 दिनांक 08-04-2025 के द्वारा वृक्षारोपण के प्रस्तावित मॉडल्स में **Grassland Development – 5ha** एवं **NHAI-Tree Guard Model & Barbed Wire Fencing** मॉडल्स के अनुमोदन हेतु मॉडल कमेटी की बैठक दिनांक 21-04-2025 को 11:00 बजे **Hybrid Mode** के माध्यम से अरण्य भवन के मीटिंग हॉल (A-115) में सुश्री टी. जे. कविथा, अतिरिक्त प्रधान मुख्य वन संरक्षक, (विकास) राजस्थान जयपुर की अध्यक्षता में आयोजित की गई, जिसमें निम्न सदस्यों ने भाग लिया:-

1. श्री पी. काथिरवेल, मुख्य वन संरक्षक, भरतपुर- सदस्य (V.C.)
2. श्री हनुमाना राम, मुख्य वन संरक्षक, बीकानेर –सदस्य (V.C.)
3. श्रीमती ख्याति माथुर, मुख्य वन संरक्षक, अजमेर – सदस्य (V.C.)
4. श्री आर.के. जैन, मुख्य वन संरक्षक, जोधपुर- सदस्य (V.C.)
5. श्री सुनील, वन संरक्षक उदयपुर,- सदस्य- सदस्य (V.C.)
6. श्री एस. आर. यादव, मुख्य वन संरक्षक, वन्यजीव उदयपुर, (V.C.)
7. श्रीमती सोनल जोरिहार, मुख्य वन संरक्षक, कोटा- सदस्य (V.C.)
8. श्री रेखा राम, उप वन संरक्षक (प्रशासन), प्रमुवसं (ट्री), जयपुर
9. श्री सुशील कुमार सैनी, उप वन संरक्षक, आयोजना, जयपुर
10. श्री जगदीश गुप्ता, उप वन संरक्षक, **CWL**, जयपुर राजस्थान।
11. श्री आर.पी.गुप्ता, सलाहाकार, **NHAI** जयपुर राजस्थान।

श्री एस.आर.वी. मूर्ति, मुख्य वन संरक्षक (आयोजना) राजस्थान, जयपुर ने उपस्थित समिति सदस्यों का स्वागत किया तथा सदस्यगणों से प्रस्तावित मॉडल्स में प्रावधानों पर चर्चा की।

1. **Grassland Development –5 ha** के मॉडल पर बैठक में बिन्दुवार एवं विस्तृत चर्चा की जिसमें संभागीय मुख्य वन संरक्षक वन्यजीव, उदयपुर एवं उप वन संरक्षक, उदयपुर उत्तर ने **Ploughing V-ditch, Watering, The Removal of invasive Species, Watch&Ward** पर अपने सुझाव दिये इनके द्वारा दिये गये सुझावों को समिति द्वारा हुए उक्त मॉडल को समिति द्वारा अनुमोदित किया गया।

Signature valid

Digitally signed by S R Vankateswara Murthy
Designation : Chief Conservator Of Forest
Date: 2025.05.01 15:07:33 IST
Reason: Approved



2. NHAI द्वारा NHAI-Tree Guard & Barbed Wire Fencing- @285 के मॉडल प्रस्तुत किये गये इन मॉडल के बारे में श्री आर.पी.गुप्ता, सलाहकार NHAI जयपुर ने समिति को बिन्दुवार अवगत करवाया, जिसमें समिति द्वारा सभी वर्षों के विविध व्यय में replacement of plants in accidental cases के प्रावधान शामिल करते हुए उक्त दोनों मॉडल्स को अनुमोदित किया गया।

तत्पश्चात बैठक सधन्यवाद समाप्त हुई।

सदस्य सचिव, मॉडल अनुमोदन समिति
मुख्य वन संरक्षक (आयोजना),
राजस्थान, जयपुर।

क्रमांक:-एफ3 (13)प्रमुवसं/ट्री/तक0/21-22/

दिनांक:-

प्रतिलिपि निम्न को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है :-

- 1-निजी सचिव, प्रधान मुख्य वन संरक्षक (हॉफ), राजस्थान जयपुर
- 2- निजी सचिव, प्रधान मुख्य वन संरक्षक (विकास), राजस्थान, जयपुर
- 3-निजी सचिव, प्रधान मुख्य वन संरक्षक एवं वन्यजीव प्रतिपालक, राजस्थान जयपुर
- 4-परियोजना निदेशक, RFBP, राजस्थान, जयपुर
- 5-परियोजना निदेशक, RFBDP, राजस्थान, जयपुर
- 6-वित्तीय सलाहकार, वन विभाग, राजस्थान, जयपुर
- 7-संबंधित मुख्य वन संरक्षक/सदस्य गण.....

सदस्य सचिव, मॉडल अनुमोदन समिति
मुख्य वन संरक्षक (आयोजना),
राजस्थान, जयपुर

Signature valid

Digitally signed by S R Venkateswara
Murthy
Designation : Chief Conservator Of
Forest
Date: 2025.05.01 13:07:33 IST
Reason: Approved

Model Cost Norms Grassland Development

labour rate - 285 per day
unit - 5 Hac
Perimeter - 240 m / Hac

YEAR - 0 Advance Action

S.No.	Item of works	Unit	Qty.	Rate	Labour Cost	Material Cost	Total Cost
1	Survey of area layout of contour V-Ditch and making of segment/ plot	Prorate			521.75	53.54	575.29
2	Making pillars from wood/Iron/Stone [3 m long] including transportation to the construction site	Prorate	80	450	0	36000	36000
3	45 cm*45 cms pits digging and pillars fixing every 3 mtr (4 pillar/per person/per day) (400 Pillar/4 per person)	M. days	20	285	5700	0	5700
4	Stretching and pulling the chain link fencing and tying it with GI wire on the pillars (5 pillar per person per day)	M. days	16	285	4560	0	4560
5	Purchase of chain-link (size 75 mm *75 mm made of G.I. wire of dia 3.15MM Height 2.5 m 240 m / Hac)	Prorate	240	0	0	113280	113280
6	Digging of 50 rmt V-ditch with cross section size 1.2*[(0.30 + 0.0)*]2 sqmt	Rmt	50	26.98	1349.08	0	1349.08
7	Removal of invasive species [Lantana camera, Prosopis juliflora etc] (40 percent infestation)	Hac	0.4	35999.42	14399.77		14399.768
8	Restoration of natural regeneration by silviculture operations	Prorate	-	-	324.62	0	324.62
9	Collection /purchases of grass seeds of local indigenous species	Prorate	-	-	3300	2000	5300
10	2 Ploughing operation with plough by tractor [at market rate]	Hrs	24	900	0	21600	21600
11	Ploughing by cultivator [1 time]	Hrs	12	900		10800	10800
12	Purchase of tools, plant and insecticide	Prorate	1	600	0	600	600
13	Labour amenities	Prorate		500	500	0	500
14	Watch and ward 4 month	Prorate	1	5928	5928	0	5928
15	Miscellaneous and unforeseen expenses including running of vehicle	Prorate			100	396.87	496.87
TOTAL					36683.218	184730.41	221413.628

YEAR - 1 PLANTATION YEAR

S.No.	Item of works	Unit	Qty.	Rate	Labour Cost	Material Cost	Total Cost
1	In continuation and subsequent removal of invasive species [Lantana camera, Prosopis juliflora etc] (50 percent of previous year)	Hac.	0.2	35999.42	7199.884	0	7199.884
2	Preparation of Grass slips in root trainer including cost of root trainer	Prorate	100	-	400	2000	2400
3	Planting of grass slips on V-Ditch prepared in Root trainer [space .50 mtr transportation included]	Prorate	100	3.35	335	0	335
4	Grass seeds sowing twice plough with tractor in natural layer	Prorate	-	0	110.04	422.24	532.28
5	Sowing of Grass seeds in V-ditch	Prorate	-	0	515.71	0	515.71
6	Sowing of grass seeds after making notches 20*20*15 cms	Prorate	100	2.2	220.08	0	220.08
7	Making of seed ball and dispersal of seed balls	Prorate	4000	0.79802	3192.08	0	3192.08
8	Weeding [three time] (25 man-days / hectare)	Prorate	75	285	21375		21375
9	Collection /purchases of grass seeds of local indigenous species	Prorate	-	-	550.2	110.04	660.24
10	Watch and ward charges for 12 month	Prorate	-	-	17784	0	17784
11	Construction of gate and fixing of sign board	Prorate	-	-	484.05	76.53	560.58
12	Miscellaneous and unforeseen expenses including running of vehicle	Prorate	-	-	275.96	237.84	513.8
TOTAL					52442.004	2846.65	55288.654

उ.व.स. (प्रशासन)
प्रमुखस (डी)
राज. जयपुर

(एस.आर.वी. मूर्ती)
मु.व.स. (आयोजना)
राजस्थान, जयपुर

YEAR 2 - MAINTENANCE - I

S.No.	Item of works	Unit	Qty.	Rate	Labour Cost	Material Cost	Total Cost
1	In continuation and subsequent removal of invasive species [Lantana camera, Prosopis juliflora etc] (50 percent of 0 year)	Hac.	0.2	35999.42	7199.884	0	7199.884
2	Collection /purchases of grass seeds of local indigenous species	Prorate			220.08	110.04	330.12
3	Preparation of Grass slips in root trainer including cost of root trainer	Prorate	100	-	400	2000	2400
4	Planting of grass slips on V-Ditch prepared in Root trainer [space .50 mtr transportation included]	Prorate	100	3.35	335	0	335
5	Sowing of grass seeds after making notches 20*20*15cms	Prorate	50	2.2	110	0	110
6	Sowing of Grass seeds on V-Ditch.	Prorate			440.16	0	440.16
7	Weeding [Three time]	Prorate	75	285	21375		21375
8	R & M of vehicle	Prorate			0	403.85	403.85
9	Expenditure on maintenance including [repair of fencing]	Prorate			519.61	141.17	660.78
10	Watch and ward charges for 12 month	Prorate			1780.88	0	1780.88
11	Miscellaneous expenditure [Labour, instruments, machine etc.]	Prorate			248.73	114.9	363.63
	TOTAL				32629.344	2769.96	35399.304

Year wise Cost Statement Development Per hectare

S.No.	Item of works	Unit	Qty.	Rate	Labour Cost	Material Cost	Total Cost
1	YEAR - 0 Advance Action				36683.218	184730.41	221413.628
2	YEAR - 1 Plantation year				52442.004	2846.65	55288.654
3	YEAR 2 - Maintenance - I				32629.344	2769.96	35399.304
	Grand Total				121754.566	190347.02	312101.586

माडल्स कार्यस्थल विशेष पर कार्य सम्पादित कराने के लिये प्राक्कलन नहीं है वरन केवल मार्-दर्शक है। कार्यस्थल पर कार्य सम्पादित कराने हेतु कार्य स्थान की विशेषताओंपरिस्थितियों के अनुसार प्राक्कलन के आधार पर कार्य कराये जाये।

उ.व.सं. (प्रशासन)
प्रमुखसं (टी)
राज. जयपुर

(एस.आर.वी. मूर्थी)
मु.व.सं. (आयोजना)
राजस्थान, जयपुर

— 12

MODEL COST ESTIMATE FOR PLANTION ALONG NHAI ROADS (BARBED WIRE FENCING MOUDLE)												
Labour Rate @285/- per day												
For Sites having more than 50% length with Two or more Rows												

Particular	Length in KM			No. of Plants in LHS				No. of Plants in RHS				Total Plants
	LHS	RHS	Total	1st Row	Intermediate Rows	Last Row	Total	1st Row	Intermediate Rows	Last Row	Total	
2 row planting with Barbed	7	7	14	2333	1167	0	3500	2333	1167		3500	7000
3 or more row planting with	2	2	4	667	333	167	1167	667	333	167	1167	2334
1 row planting with Tree	1	1	2	167	0	0	167	167	0	0	167	334
Land Parcel			0				0				0	0
Total	10	10	20	3167	1500	167	4834	3167	1500	167	4834	9668
Existing Trees in Tree Guard							0				0	0
Existing Trees in Barbed Wire							100				50	150
Net Planting Target							4734				4784	9518
Length of Fencing in Mts	18180	18180	36360									
No. of Tree Guards	167	167	334									

1st Row	Plant to Plant distance 3 Mts	333 plants/KM	Small to Medium height ornamental Trees like Kachnar, Amaltas, Jakranda, Peltiform, Tabebuia spp, etc.
2nd & Intermediate Rows	Plant to Plant distance 6 Mts	167 plants/KM/Row	Shady & Fruit Bearing Trees like Neem, Shisham, Arjun, Siris, Jamun, Bakain, Mango, Paras Pipal etc.
3rd/Last Row	Plant to Plant distance 12 Mts	83 plants/KM	Large size Shady Trees like Baniyan, Pipal, Gular, Imali, Pilkhan etc.
Single Row with Tree Guards	Plant to Plant distance 6 Mts	167 plants/KM	Shady & Fruit Bearing Trees like Neem, Shisham, Arjun, Siris, Jamun, Bakain, Mango, Paras Pipal etc.
Distance between 2 Rows	3 Mts		
Labour Rate	Rs. 285/day		


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 मु.व.स. (आयोजना)
 राजस्थान, जयपुर

YEAR 1 : ADVANCE ACTION & PLANTING								
S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
1	2	3	4	Labour	Material	Labour	Material	Total
5	6	7	8	9				
1	Collection of data for preparation of DPR, micro planning and Management plan and Surveys of area etc.	KM	20	63.34	159.69	1266.8	3193.8	4460.6
2	Tree Guard Fencing with 4 RCC panels of 45 cm width and 1.8 Mt height each, including cost of material, transportation, fixing etc.	No.	334	253.33	1490.44	84612.22	497806.96	582419.18
3	Fencing with RCC Post of size 2.10 m x (0.10+0.15) x 1/2 x 0.10 (5 m apart) with 5 strand barbed wire of 12 gauge with 2 cross wire or 3 strand barbed wire of 12 gauge supported with 5 feet high weldmesh of 4" * 4" including cost of material, fixing, etc.	RMT	36360	54.47	223.57	1980529	8129005	10109534
4	Purchase of tools & equipment.	KM	20	0	372.61	0	7452	7452
5	Sign board including painting and fixing.	KM	20	63.34	479.07	1267	9581	10848
6	Watch & Ward for 9 months: one watch man for every 4 km. each side	Man Months	45	7410	0	333450	0	333450
7	Labour Amenities.	KM	20	31.67	79.85	633	1597	2230
8	Site clearance including removal of unwanted bushes, leveling of the site wherever required.	KM	20	380	745.22	7600	14904	22504
9	Construction of temporary cattle guard hut for watch and Ward. One at 10 kilometers.	KM	20	316.67	532.3	6333	10646	16979
10	Digging of pits of Size 0.60 x 0.60 x 0.60 m including lay out, marking, dressing, etc.	No.	9518	44.33	0	421933	0	421933
11	Planting in pit size 0.60 x 0.60 x 0.60 m including local transportation of plants at site, submerging the polybags in insecticide treated water, cutting and removing the polythene bag, refilling the pit after removing stones and pressing the soil around plant including construction of thanwla and initial watering.	No.	9518	0	0	0	0	0
12	(A) 20 x 40 cm bag	No.	7614	30.1	0	229181	0	229181
13	(B) 30 x 40 cm bag	No.	1904	38.33	0	72980	0	72980
14	Weeding and hoeing of plants after planting and in rains (2 times)	No.	19036	4.42	0	84139	0	84139
15	Procurement of Plants for 3rd/last row with 2 mts or more height with good health and growth in 30x40 cm Poly bags with 20% Extra for plants required for casulty replacement including transportation.	No.	2285	12.67	95.81	28951	218926	247877
16	Procurement of Plants with 1.5 mts or more height with good health and growth in 20x40 cm Poly bags, with 20% Extra for plants required for casulty replacement including transportation.	No.	9137	12.67	42.58	115766	389053	504819
17	Adding the farm yard manure/vermi compost/DAP/insecticide etc. to each pit including cost of material	No.	9518	2.53	8.52	24081	81093	105174
18	Irrigation (watering) of plants (watering will be as per the weather conditions) by tractor tanker, total 10 watering.	No.	95180	3.8	5.63	361684	535863	897547
19	Hoeing of plants after each watering.	No.	95180	3.15	0	299817	0	299817
20	Singling, pruning and other silvicultural operations for the existing trees/plants	No.	150	50.66	0	7599	0	7599
21	Consolidation of JFM and participatory programs.	KM	20	0	532.3	0	10646	10646
22	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, mainantainance of vehicles and vehicle on rent for inspection & monitoring)	KM	20	3800.01	9581.4	76000	191628	267628
TOTAL YEAR-1						4137823	10101397	14239220
YEAR-2 : MAINTENANCE								


 उ.व.सं. (प्रशासन)
 प्रमुखसं (टी)
 राज. जयपुर


 (एस.आर.वी. मूर्ती)
 मु.व.सं. (आयोजना)
 राजस्थान, जयपुर

S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Planting for casualty replacement including redigging and treatment of pit and plant with insecticides, local transport, making crescent shape Thanwla and watering with cost of water and transport	Nos.	952	49.43	0	47057	0	47057
2	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tanker, total 16 watering	No.	152288	3.8	5.63	578694	857381	1436076
3	Weeding and hoeing of plants after planting and in rains 2 times	No.	19036	4.42	0	84139	0	84139
4	Hoeing of plants after each watering	No.	152288	3.15	0	479707	0	479707
5	Treatment with insecticide and fertilizer including cost of material	No.	9518	0.64	1.6	6092	15229	21320
6	Fencing repair as per requirement	KM	20	506.66	106.46	10133	2129	12262
7	Pruning of Plants	No.	1904	2.54	0	4836	0	4836
8	Singling, pruning and other silvicultural operations for the existing trees/plants	No.	150	50.66	0	7599	0	7599
9	Watch & Ward for 12 months: One watch man for every 4 km, each side.	Man Months	60	7410	0	444600	0	444600
10	Labour amenities	KM	20	31.67	79.85	633	1597	2230
11	Consolidation of JFM and participatory programs.	KM	20	0	266.15	0	5323	5323
12	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, maintenance of vehicles and vehicle on rent for inspection & monitoring)	KM	20	633.34	1596.9	12667	31938	44605
TOTAL YEAR- 2						1676158	913597	2589756

YEAR-3 : MAINTENANCE								
S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tanker, total 12 watering	No.	114216	3.8	5.63	434021	643036	1077057
2	Weeding and hoeing of plants after planting and in rains	No.	9518	4.42	0	42070	0	42070
3	Hoeing of plants after each watering	No.	114216	3.15	0	359780	0	359780
4	Treatment with insecticide and fertilizer including cost of material	No.	9518	2.53	0	24081	0	24081
5	Fencing repair as per requirement	KM	20	1266.67	0	25333	0	25333
6	Pruning of Plants	No.	2855	2.54	0	7252	0	7252
7	Watch & Ward for 12 months: One watch man for every 4 km each side.	Man Months	60	7410	0	444600	0	444600
8	Labour amenities	KM	20.0	31.67	79.85	633	1597	2230
9	Consolidation of JFM and participatory programs.	KM	20	0	266.15	0	5323	5323
10	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, maintenance of vehicles and vehicle on rent for inspection & monitoring)	KM	20	506.66	1277.52	10133	25550	35684
TOTAL YEAR-3						1347903	675506	2023409


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YEAR-4 : MAINTENANCE								
S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tankar, total 8 watering	No.	76144	3.8	5.63	289347	428691	718038
2	Weeding and hoeing of plants after planting and in rains	No.	9518	4.42	0	42070	0	42070
3	Hoeing of plants after each watering	No.	76144	3.15	0	239854	0	239854
4	Fencing repair as per requirement	KM	20	950	0	19000	0	19000
5	Pruning of Plants	No.	3807	2.54	0	9670	0	9670
6	Watch & Ward for 12 months: One watch man for every 4 km.	Man Months	60	7410	0	444600	0	444600
7	Labour amenities	KM	20	31.67	79.85	633	1597	2230
8	Consolidation of JFM and participatory programs.	KM	20	0	266.15	0	5323	5323
9	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, maintainance of vehicles and vehicle on rent for inspection & monitoring)	KM	20	380	958.14	7600	19163	26763
TOTAL YEAR-4						1052774	454774	1507547

YEAR-5 : MAINTENANCE								
S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tankar, total 4 watering	No.	38072	3.8	5.63	144674	214345	359019
2	Weeding and hoeing of plants after planting and in rains	No.	9518	4.42	0	42070	0	42070
3	Hoeing of plants after each watering	No.	38072	3.15	0	119927	0	119927
5	Fencing repair as per requirement	KM	20	950	0	19000	0	19000
6	Pruning of Plants	No.	3807	2.54	0	9670	0	9670
7	Watch & Ward for 12 months: One watch man for every 4 km.	Man Months	60	7410	0	444600	0	444600
9	Labour amenities	KM	20.0	31.67	79.85	633	1597	2230
10	Consolidation of JFM and participatory programs.	KM	20.0	0	266.15	0	5323	5323
11	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, maintainance of vehicles and vehicle on rent for inspection & monitoring)	KM	20.0	253.33	638.76	5067	12775	17842
TOTAL YEAR- 5						785640	234041	1019680

ABSTRACT OF TOTAL COST FOR 5 YEARS						
S.NO.	ITEM OF WORK	YEAR	AMOUNT			
			Labour	Material	Total	
1	2	3	4	5	6	
1	ADVANCE ACTION AND PLANTING	YEAR 1	4,137,823	10,101,397	14,239,220	
2	MAINTENANCE	YEAR 2	1,676,158	913,597	2,589,756	
3	MAINTENANCE	YEAR 3	1,347,903	675,506	2,023,409	
4	MAINTENANCE	YEAR 4	1,052,774	454,774	1,507,547	
5	MAINTENANCE	YEAR 5	785,640	234,041	1,019,680	
Total cost of 5 years			9,000,298	12,379,315	21,379,613	
Cost per Plant					2,246	

Note:	
1	Above is the model cost estimation prepared for 10 KM length and different widths taking as a sample only, actual cost estimation will be prepared as per actual space available for plantation.
2	NHAI will provide information of chainagewise available width for plantation, number of rows, number of existing trees, number of plants to be planted etc.. Based upon this information, the cost estimation will be prepared and the same will be submitted to NHAI.
3	If any deviation is required in the proposal, the same will be approved by the concern CCF.
4	Items and BSR rate are considerd on average basis for the purpose of preparation of DPR. Actual estimate can be prepared as per required items and applicablel BSR at the time of implementation.


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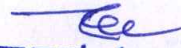
MODEL COST ESTIMATE FOR PLANTATION OF NHAI SITES (TREE GUARD MOUDLE)

Labour Rate Rs. 285/- Per Day

For Sites having more than 50% length with single Row

Particular	Length in KM			No. of Plants in LHS				No. of Plants in RHS				Total Plants
	LHS	RHS	Total	1st Row	Intermediate Rows	Last Row	Total	1st Row	Intermediate Rows	Last Row	Total	
2 row planting with Barbed wire fencing	2	2	4	667	333	0	1000	667	333		1000	2000
3 or more row planting with Barbed wire fencing	0	0	0	0	0	0	0	0	0	0	0	0
1 row planting with Tree Guard fencing	8	8	16	1333	0	0	1333	1333	0	0	1333	2666
Land Parcel			0				0				0	0
Total	10	10	20	2000	333	0	2333	2000	333	0	2333	4666
Existing Trees in Tree Guard Section							100				50	150
Existing Trees in Barbed Wire Section												
Plantin							2233				2283	4516
Length of Fencing in Mts	4040	4040	8080									
No. of Tree Guards	1233	1283	2516									

1st Row	Plant to Plant distance 3 Mts	333 plants/KM	Small to Medium height ornamental Trees like Kachnar, Amaltas, Jakranda, Peltiform, Tabebuia spp. etc.
2nd & Intermediate Rows	Plant to Plant distance 6 Mts	167 plants/KM/Row	Shady & Fruit Bearing Trees like Neem, Shisham, Arjun, Siris, Jamun, Bakain, Mango, Paras Pipal etc.
3rd/Last Row	Plant to Plant distance 12 Mts	83 plants/KM	Large size Shady Trees like Baniyan, Pipal, Gular, Imali, Pilkhan etc.
Single Row with Tree Guards	Plant to Plant distance 6 Mts	167 plants/KM	Shady & Fruit Bearing Trees like Neem, Shisham, Arjun, Siris, Jamun, Bakain, Mango, Paras Pipal etc.
Distance between 2 Rows	3 Mts		
Labour Rate	Rs. 285/day		


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YEAR 1 : ADVANCE ACTION & PLANTING

S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Collection of data for preparation of DPR, micro planning and Management plan and Surveys of area etc.	No.	4516	0.32	0.80	1445.12	3612.80	5058
2	Tree Guard Fencing with 4 RCC pannels of 45 cm width and 1.8 Mt height each, including cost of material, transportation, fixing etc.	No.	2516	253.33	1490.44	637378.28	3749947.04	4387325
3	Fencing with RCC Post of size 2.10 m x (0.10+0.15) x 1/2 x 0.10 (5 m apart) with 5 strand barbed wire of 12 gauge with 2 cross wire or 3 strand barbed wire of 12 gauge supported with 5 feet high weldmesh of 4" x 4" including cost of material, fixing, etc.	RMT	8080	54.47	223.57	440117.6	1806445.60	2246563
4	Purchase of tools & equipment.	No.	4516	0	1.06	0	4786.96	4787
5	Sign board including painting and fixing.	No.	4516	0.25	1.92	1129	8670.72	9800
6	Watch & Ward for 9 months: one watch man for every 4 km. each side	Man Months	23	7410	0.00	166725	0.00	166725
7	Labour Amenities.	No.	4516	0.32	0.80	1445.12	3612.80	5058
8	Site clearance including removal of unwanted bushes, leveling of the site wherever required.	No.	4516	0.76	1.49	3432.16	6728.84	10161
9	Construction of temporary cattle guard hut for watch and Ward. One at 10 kilometers.	No.	4516	0.89	1.38	4019.24	6232.08	10251
10	Digging of pits of Size 0.60 x 0.60 x 0.60 m including lay out, marking, dressing, etc.	No.	4516	44.33	0.00	200194.28	0.00	200194
11	Planting in pit size 0.60 x 0.60 x 0.60 m including local transportation of plants at site, submerging the polybags in insecticide treated water, cutting and removing the polythene bag, refilling the pit after removing stones and pressing the soil around plant including construction of thanwla and initial watering	No.	4516	0	0.00	0	0.00	0
12	(A) 20 x 40 cm bag	No.	3613	30.1	0.00	108751.3	0.00	108751
13	(B) 30 x 40 cm bag	No.	903	38.33	0.00	34611.99	0.00	34612
14	Weeding and hoeing of plants after planting and in rains (2 times)	No.	9032	4.42	0.00	39921.44	0.00	39921
15	Procurement of Plants for 3rd/last row with 2 mts or more height with good health and growth in 30x40 cm Poly bags with 20% Extra for plants required for casualty replacement including transportation.	No.	1084	12.67	95.81	13734.28	103858.04	117592
16	Procurement of Plants with 1.5 mts or more height with good health and growth in 20x40 cm Poly bags, with 20% Extra for plants required for casualty replacement including transportation.	No.	4336	12.67	42.58	54932.052	184609.85	239542
17	Adding the farm yard manure/vermi compost/DAP/insecticide etc to each pit including cost of material	No.	4516	2.53	8.52	11425.48	38476.32	49902
18	Irrigation (watering) of plants (watering will be as per the weather conditions) by tractor tanker, total 10 watering.	No.	45160	3.8	5.63	171608	254250.80	425859
19	Hoeing of plants after each watering.	No.	45160	3.14	0.00	141802.4	0.00	141802
20	Singling, pruning and other silvicultural operations for the existing trees/plants	No.	150	50.66	0.00	7599	0.00	7599
21	Consolidation of JFM and participatory programs.	No.	4516	0	1.06	0	4786.96	4787
22	Miscellaneous and unforeseen works and Expenditures (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, maintenance of vehicles and vehicle on rent for inspection & monitoring)	No.	4516	10.76	27.15	48592.16	122609.40	171202
TOTAL YEAR-1						2088864	6298628	8387492

YEAR-2 : MAINTENANCE

S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Planting for casualty replacement including redigging and treatment of pit and plant with insecticides, local transport, making crescent shape Thanwla and watering with cost of water and transport	Nos.	452	49.44	0.00	22346.88	0.00	22347
2	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tanker, total 16 watering	No.	72256	3.8	5.63	274572.8	406801.28	681374
3	Weeding and hoeing of plants after planting and in rains 2 times	No.	9032	4.42	0.00	39921.44	0.00	39921
4	Hoeing of plants after each watering	No.	72256	3.14	0.00	226883.84	0.00	226884
5	Treatment with insecticide and fertilizer including cost of material	No.	9032	0.64	1.60	5780.48	14451.20	20232
6	Fencing repair as per requirement	No.	9032	5.06	1.06	45701.92	9573.92	55276
7	Pruning of Plants	No.	452	2.54	0.00	1148.08	0.00	1148
8	Singling, pruning and other silvicultural operations for the existing trees/plants	No.	150	50.66	0.00	7599	0.00	7599
9	Watch & Ward for 12 months: One watch man for every 4 km, each side.	Man Months	30	7410	0.00	222300	0.00	222300
10	Labour amenities	No.	9032	0.15	0.40	1354.8	3612.80	4968
11	Consolidation of JFM and participatory programs.	No.	9032	0	0.53	0	4786.96	4787
12	Miscellaneous and unforeseen works and Expenditures (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, maintenance of vehicles and vehicle on rent for inspection & monitoring)	No.	9032	0.89	1.92	8038.48	17341.44	25380
TOTAL YEAR-2						855648	456568	1312215

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YEAR-3 : MAINTENANCE								
S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tankar, total 12 watering	No.	54192	3.8	5.63	205929.6	305100.96	511031
2	Weeding and hoeing of plants after planting and in rains	No.	4516	4.42	0.00	19960.72	0.00	19961
3	Hoeing of plants after each watering	No.	54192	3.14	0.00	170162.88	0.00	170163
4	Treatment with insecticide and fertilizer including cost of material	No.	4516	2.53	0.00	11425.48	0.00	11425
5	Fencing repair as per requirement	No.	54192	2.53	0.00	137105.76	0.00	137106
6	Pruning of Plants	No.	452	2.54	0.00	1148.08	0.00	1148
7	Watch & Ward for 12 months: One watch man for every 4 km each side.	Man	30	7410	0.00	222300	0.00	222300
9	Labour amenities	No.	54192	0.08	0.20	4335.36	10838.40	15174
10	Consolidation of JFM and participatory programs.	No.	54192	0	0.53	0	28721.76	28722
11	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, mainatnaince of vehicles and vehicle on rent for inspection & monitoring)	No.	54192	1.27	3.19	68823.84	172872.48	241696
TOTAL YEAR-3						841192	517534	1358725
YEAR-4 : MAINTENANCE								
S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tankar, total 8 watering	No.	36128	3.8	5.63	137286.4	203400.64	340687
2	Weeding and hoeing of plants after planting and in rains	No.	4516	4.42	0.00	19960.72	0.00	19961
3	Hoeing of plants after each watering	No.	36128	3.14	0.00	113441.92	0.00	113442
5	Fencing repair as per requirement	No.	4516	2.53	0.00	11425.48	0.00	11425
6	Pruning of Plants	No.	452	2.54	0.00	1148.08	0.00	1148
7	Watch & Ward for 12 months: One watch man for every 4 km.	Man	30	7410	0.00	222300	0.00	222300
9	Labour amenities	No.	4516	0.08	0.20	361.28	903.20	1264
10	Consolidation of JFM and participatory programs.	No.	4516	0	0.53	0	2393.48	2393
11	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, mainatnaince of vehicles and vehicle on rent for inspection & monitoring)	No.	4516	0.76	2.02	3432.16	9122.32	12554
TOTAL YEAR-4						509356	215820	725176
YEAR-5 : MAINTENANCE								
S.N	ITEM OF WORK	Unit	Qty.	Rate		Amount		
				Labour	Material	Labour	Material	Total
1	2	3	4	5	6	7	8	9
1	Irrigation (watering) of plants from April. to March 12 months (watering will be as per the weather conditions) by tractor tankar, total 4 watering	No.	18064	3.8	5.63	68643.2	101700.32	170344
2	Weeding and hoeing of plants after planting and in rains	No.	4516	4.42	0.00	19960.72	0.00	19961
3	Hoeing of plants after each watering	No.	18064	3.14	0.00	56720.96	0.00	56721
5	Fencing repair as per requirement	No.	4516	1.9	0.00	8580.4	0.00	8580
6	Pruning of Plants	No.	452	2.54	0.00	1148.08	0.00	1148
7	Watch & Ward for 12 months: One watch man for every 4 km.	Man	30	7410	0.00	222300	0.00	222300
9	Labour amenities	No.	4516	0.08	0.20	361.28	903.20	1264
10	Consolidation of JFM and participatory programs.	No.	4516	0	0.53	0	2393.48	2393
11	Miscellaneous and unforeseen works and Expenditures. (Cleaning of unwanted bushes at site, repair of fencing and replacement of plants in accidental cases, mainatnaince of vehicles and vehicle on rent for inspection & monitoring)	No.	4516	0.64	1.60	2890.24	7225.60	10116
TOTAL YEAR- 5						380605	112223	492827

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ABSTRACT OF TOTAL COST FOR 5 YEARS					
S.NO.	ITEM OF WORK	YEAR	AMOUNT		
			LABOUR	MATERIAL	TOTAL
1	2	3		4	
1	ADVANCE ACTION AND PLANTING	YEAR 1	2,088,864	6,298,628	8,387,492
2	MAINTENANCE	YEAR 2	855,648	456,568	1,312,215
3	MAINTENANCE	YEAR 3	841,192	517,534	1,358,725
4	MAINTENANCE	YEAR 4	509,356	215,820	725,176
5	MAINTENANCE	YEAR 5	380,605	112,223	492,827
	Total cost of 5 years		4,675,664	7,600,772	12,276,436
	Cost per Plant				2,718

Note:	
1	Above is the model cost estimation prepared for 10 KM length and different widths taking as a sample only, actual cost estimation will be prepared as per actual space available for plantation.
2	NHAI will provide information of chainagewise available width for plantation, number of rows, number of existing trees, number of plants to be planted etc.. Based upon this information, the cost estimation will be prepared and the same will be submitted to NHAI.
3	If any deviation is required in the proposal, the same will be approved by the concern CCF.
4	Items and BSR rate are considered on average basis for the purpose of preparation of DPR. Actual estimate can be prepared as per required items and applicable BSR at the time of implementation.


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