CHECK LIST NO.-19

SCHEME FOR

SITE SPECIFIC COMPENSATORY AFFORESTATION OVER 11.00 Ha. OF DEGREDED FOREST LAND IDENTIFIED UNDER LAXMIPUR RANGE OF KORAPUT FOREST DIVISION IN KORAPUT DISTRICT

AGAINST

KORAPUT TO SINGAPUR ROAD DOUBLING RAILWAY PROJECT. (FROM KORAPUT TO SINGARAM, KM. 0.000 TO KM. 74.800)

OF

EAST COAST RAILWAY, VISAKHAPATNAM

(GOVT. OF INDIA)

LAND SUITABILITY CERTIFICATE

This is to certify that 11.00 Ha. of Degraded forest land in Hatimali DPF of Laxmipur Forest Range in Koraput Forest Division identified for Compensatory Afforestation in lieu of 5.117 Ha. of forest land required for Forest Diversion in view of proposal for construction of Koraput to Singapur Road doubling Railway Project (Koraput to Singaram, KM 0.000 to KM 74.800) is suitable for Compensatory plantation. As per the site conditions and from management point of view the above said degraded forest land is suitable for **"ANR with Gap plantation @500/ plants per ha".** The degraded Forest land is free from encroachments. No plantation has been carried out in this particular area previously as reported by the Range Officer, Laxmipur Range.

Asst Conservator of Forests
Koraput Forest Division

Divisional Forest Officer,
Koraput Forest Division

COMPENSATORY AFFORESTATION SCHEME OVER 11.00 HA. OF DEGRADED RESERVED FOREST LAND IN KORAPUT DISTRICT IN LIEU OF DIVERSION PROPOSAL OVER 5.117 HA. FOR THE CONSTRUCTION OF KORAPUT – SINGAPUR ROAD DOUBLING RAILWAY PROJECT (0.000 KM TO 74.800 KM) OF EAST COAST RAILWAY, VISAKHAPATNAM.

INTRODUCTION

Indian Railways has started construction of Koraput-Rayagada New B.G. Rail Link Project (164 Km) in the year 1982-83 and commissioned for the entire project in the year 1996-97 for goods traffic initially. Koraput-Rayagada line popularly known as K-R line of East Coast Railway is a single line section, which connects to the Raipur/Sambalpur-Vizianagaram line at Singapur Road stations and Kottavalasa-Kirandul line at Koraput Station, it is an important Rail link to Bailadilla Mines. The line traverses through scenic hills of Eastern Ghats from a height of 943m above MSL to 245m above MSL through hinterland of Odisha State. The scenic hills are having difficult Ghats through which the alignment of existing single line traverses, comprising of sharp curves, continuous steep gradient, large nos. of tunnels, deep gorges and subsequent length of cuttings. The line was opened to Goods traffic in 1996-97 initially and finally passenger traffic in Dec'1998. Electrification of Koraput-Damanjodi section was commissioned consequent on setting of the Aluminium Plant at Damanjodi by M/s NALCO Ltd. Further, electrification of Damanjodi-Singapur Road section was commissioned in the year 2018-2019.

The line was constructed to serve several purposes simultaneously viz. extending railway network in an undeveloped area, bringing industrial development to a backward tribal district, Koraput, providing rail connection to M/s NALCO Ltd. at Damanjodi for the movement of raw materials and finished products and providing alternative route for the movement of iron ore from Bailadila mountain range to Visakhapatnam steel plant & Vizag port and other destinations. To cater to the requirement of fine ore for Vizag Steel Plant from 1984-85 onwards, the fine ore handling scheme in Bailadilla Deposit No.5 has been commissioned.

The existing railway line between Koraput-Rayagada is a single line with speed potential upto 65 Kmph and classified as "D" category and used as the transportation corridor of goods traffic mainly minerals and mine products.

The coaching traffic at present consists of seven pairs of Up & Dn trains. The demand of goods traffic on the existing single line is increasing over a period due to increase of production of goods and minerals in the vast catchment and consequent transportation requirement. As a result, doubling of the existing line is essentially required to cater the goods traffic as the existing line is already saturated.

Considering the traffic growth and projected traffic demand of the section and to avoid heavy load on single supersaturated main line. The PET survey for Koraput-

Rayagada doubling was sanctioned by the Railway Board under Demand No.2 (Surveys) vide Blue Book 2012-13.

Accordingly, the PET Survey was carried out by D.N. Consultants, Cuttack and the Report was submitted to Railway Board in the year 2015-16. The proposed doubling line connects at Singapur Road and Koraput of Odisha State. The double line between Singapur Road to Rayagada was completed during construction of Raipur-Vizianagaram doubling. Elevation of Koraput is 870m above MSL and the elevation of Singapur Road is 244.50 above MSL.

HAL factory (Hindustan Aeronautics Limited, a defence enterprise of the Government of India) is only 15Km from Koraput town. This HAL factory makes military aircraft engines for MIG and expanding for Sukhoi assembly line. The HAL factory and township surrounded by hills and forest. It employs 6000 Engineers and Technicians, all are staying in the township, next to the factory. The NALCO, Damanjodi also its significance to boost up the economy of the Koraput District. Around 2500 Engineers & Technicians are engaged in the process of extraction of Aluminia from Bauxite. Other than the employees there are thousands of workers engaged by hundreds of contractors. Nearby Similguda is developed to cater this population for marketing as well as entertainment. Similiguda is mostly inhabited by trading community. These traders and contractors do business in HAL, Sunabeda and NALCO, Damanjodi.

In the area the major Aluminia plant established by M/s Aditya Aluminium Ltd. viz. Utkal Alumina International Ltd. (UAIL) of 1.5MTPA near Tikiri and expansion of production capacity is under progress. Besides existing major steel plant of M/s RINL at VSKP, three new steel plants are being established in the area viz. M/s TISCO with 5.5 MTPA capacity (near Jagadalpur). M/s Essar Steel Plant of 3.7 MTPA capacity near Bhaunsi station and Integrated Steel Plant of 3.0 MTPA capacity of M/s NMDC near Ambagaon. Due to which substantial additional goods traffic of Ore, finished goods as well as coal linkage is expected on this section.

The doubling line in between Koraput-Singapur Road project falls entirely in Odisha State and will traverses through two districts of Odisha viz. Koraput & Rayagada.

LAND INVOLVED

These project extents over an area of 5.117 Ha. Forest land for the construction of Koraput to Singapur Road Doubling Railway Project. From Koraput to Singaram (Km. 0.000 to Km. 74.800). Hence, this 5.117 Ha. of forest land has been proposed for Diversion under Forest (Conservation) Act, 1980 in lieu of which the Compensatory Afforestation will be raised over double the extent of degraded forest land i.e. 10.234 Ha. Say 11.00 Ha. in Koraput Forest Division accordingly 11.00 Ha. has been identified in Hatimali DPF vide memo no.562 dtd. 30.01.2023 of Divisional Forest Officer, Koraput.

Details of Compensatory Afforestation Scheme:

This Scheme of Compensatory Afforestation over an area of 11.00 Ha is prepared against the diversion of forest land over an area of 5.117 Ha. for the construction of Koraput to Singapur Road Doubling Railway Project. From Koraput to Singaram (Km. 0.000 to Km. 74.800). The Proposed Compensatory Afforestation area has been selected based on the DSS report (density < 0.4) and is well within the Notified forest blocks. In order to accommodate the total number of seedlings (@ 1000 seedling per ha of diverted area) a gross area of 11.00 ha has been selected in Hatimali DPF (Near Village Kasiguda).

The scheme has been prepared over **11.00** Ha under ANR with Gap @500 plants/ ha. with maintenance up to ten years (with 0th year) in the current wage rate @ Rs.345/- per manday to accommodate 5500 nos. of seedlings.

Details of land selected for the CA Scheme

Sl. No.	Name of Range	Name of the site	Mode of Plantation	No of seedling /ha	Area in Ha.	No. of seedlings to be planted
1.	Laxmipur	Hatimali DPF (Kasiguda Village)	ANR With Gap	500	11.00	5500

Scheme for Compensatory Afforestation over 11.00 ha @ 500 no of seedlings/ha in Hatimali DPF of Laxmipur Range

District: Koraput
Forest Division: Koraput
Range: Laxmipur
Status of Forest : Hatimali DPF
Name of the Site: Kasiguda
Area suitable for CA: 11.00 Ha

Description of area:

Hatimali DPF is situated in Laxmipur Range of Koraput Division. The identified area of 11.00 ha is having DGPS survey area of 11.454 ha. The forest type is Northern Dry Mixed Deciduous Forest (5B/C2) as per Champion and Seth's Forest classification. The top story of crop composition of the forest is of Dhaura, Asan,Kusum, Arjun, Mahul, Barabakulia,etc. middle storey comprises of Chara, Kendu, Bahada, Jamun, Kochila, Kasi, Genduli with few

Sal. The main species found in the undergrowth are Kapasia, Mallotus, Sunari, Dhatki, Nahalabeli and Tilei.

This DPF is located on Survey of India Open Series Topo sheet no. **F44 K13** confined within LATITUDE 18°52'03" & 18°51'37", LONGITUDE: 82°56'25" & 82°56'51" for UTM **Zone -44** and indicated on the map enclosed in Page No.-5. The proposed area of plantation is free from encroachment, other encumbrances and found suitable for plantation.

Soil type:

Soil is fairly deep, well drained and moderately acidic with high phosphorus fixing capacity. Red Soil is seen in Hatimali DPF. The texture ranges from loamy to clayey loam.

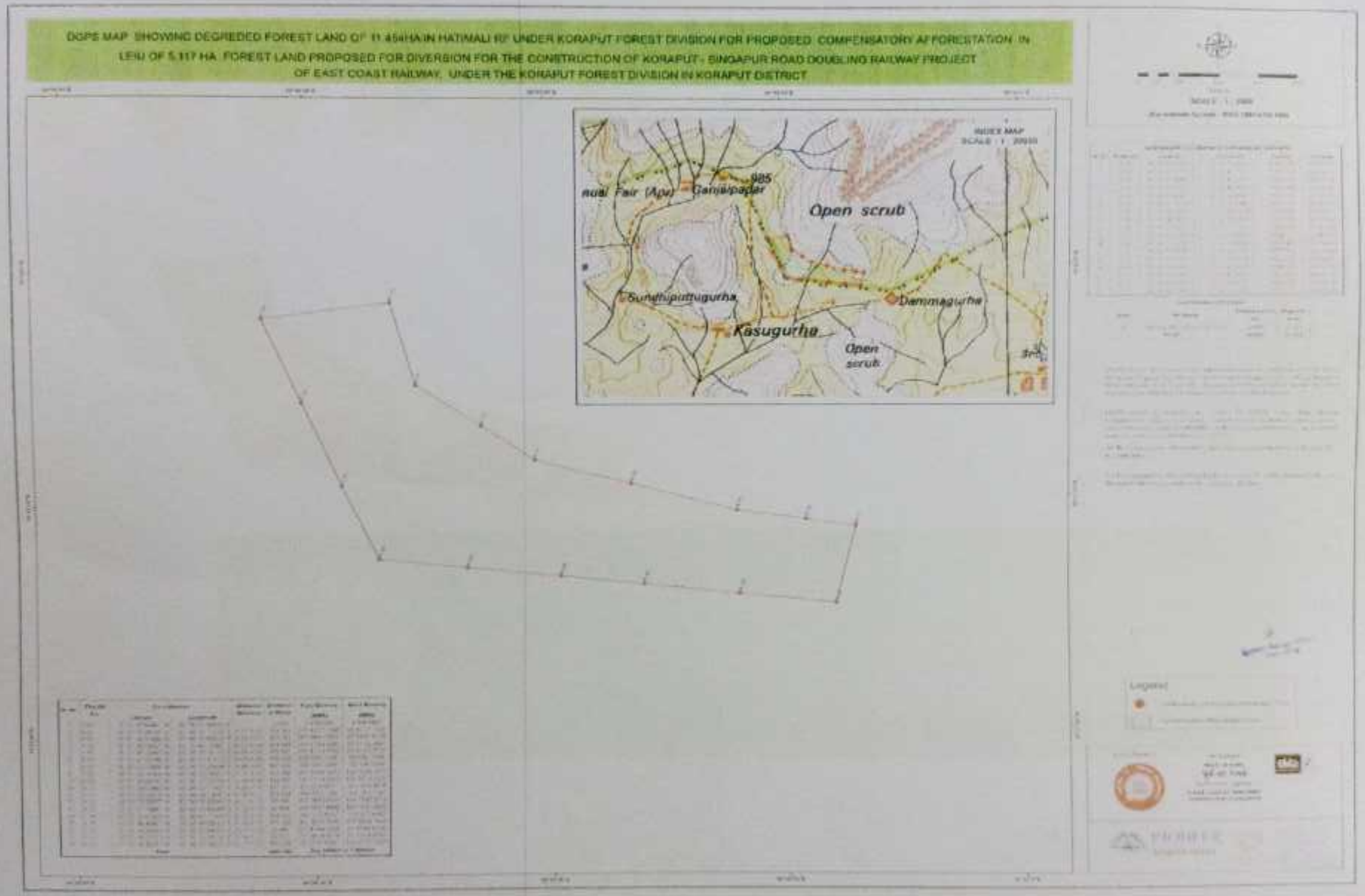
Topography and slope:

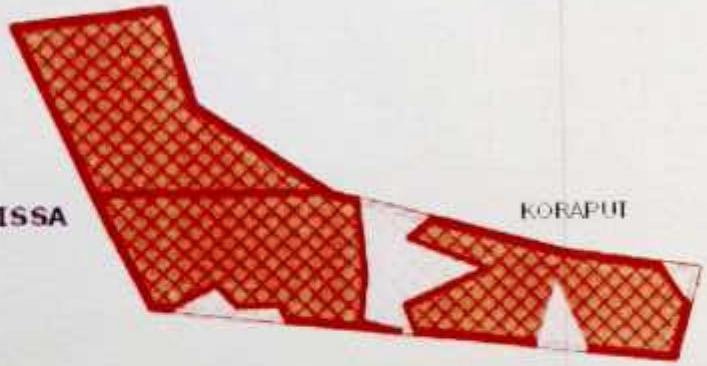
The topographical configuration of the identified site is undulating with a slope of less than 45° and medium to gentle slope.

Whether the area is bearing any root stock of vegetation:

The site selected for Compensatory Afforestation has existing root stock of local species and the existing vegetation are in degraded stage.

Geo Referenced Map of the site :





Forest Cover Map

FCM Without Grid Result

NON FOREST	SCRUB
0.02	0.10

400 m
Long: 82.953

Forest Range Officer
Laxmipur

Divisional Forest Officer
Koraput Forest Division

Asst. Conservator of Forest
Koraput Forest Division

DSS ANALYSIS CERTIFICATE

Sl. No.	Name of the Range	Name of the Forest Block	Classification of identified land (in Ha.)							Area suitable for plantation (in Ha.)				Plantation Model (AR/ANR)	Remarks
			VDF	MDF	OF	NF	Scrub	Water	Total	OF	NF	Scrub	Total		
1	Laxmipur	Hatimali DPF	0	0	0	02	10	0	12	0	02	09	11	ANR@500 plants per ha. Over the net area of 11 Ha.	

Date: 19/10/2023

Place: Koraput

Asst. Conservator of Forest
Koraput Forest Division

Divisional Forest Officer,
Koraput Forest Division

Divisional Forest Officer
Koraput Forest Division

Temperature:

The area experiences cold weather between November – January when the temperature drops to less than 13° C. the temperature rises steadily from January onwards reaching 32° C to 38° C in summer (May). So, it is under tropical condition with limited rainy days.

Climate& Rainfall:

The area has tropical climate with monsoon rains from June to September and occasional rains during the autumn. This area also experiences occasional gutsy wind to heavy thunderstorms during summer season (April to June). Monsoon breaks out in early to middle of June and continues up to September. The average annual rainfall is about 1600 mm under the influence of south west monsoon. On average, there are about 100 rainy days. The humidity is maximum in the month of July to August (90%) and minimum in February (36%). The wind velocity varies between 40 KMPH and 80 KMPH, although occasional higher values have also been reported. Lightening incidents are rarely reported in this area.

Plantation Model:

The identified site over 11.00 Ha. in Hatimali DPF is a patch of degraded Forest with density <0.4. The topography is gentle and has good soil depth. Thus, it is proposed to take up plantation under **ANR With Gap Plantation @ 500 seedling/ha**.

Special Objectives of Compensatory Afforestation Scheme are as follows:

- To restrict the degradation by reducing the biotic interference to barest minimum and reverse the trend towards the process of restoration of vegetation.
- To develop the forest by providing site-specific silvicultural treatment.
- To facilitate the boosting of natural regeneration and ensure their establishment.
- To take up appropriate soil moisture conservation (SMC) measures to improve the soil and moisture regime.
- To improve the bio-diversity of these blocks.
- To meet the need of the local villagers with regard to firewood and small timber depending upon the productivity (from silvicultural operations like thinning.

subsidiary silvicultural operation, climber cutting, cutting of high stumps, double shoot cutting etc.)

Item of works to be taken up:

To achieve the above objectives, the following items of works are mainly prescribed to be taken up:

- Survey & Demarcation.
- Fencing.
- Site Clearance & Gap Planting.
- Soil & Moisture Conservation Measures.
- Protection of Plantation
- EPA (Entry Point Activity)
- Monitoring & Evaluation Mechanism

Survey &Demarcation:

The identified area has been surveyed by DGPS and also map has been prepared with DGPS Coordinates of Survey Stations of Compensatory Afforestation area is given in the following table. The area will be demarcated with RCC pillars of size 1.0 m x 10 cm x 10 cm for clear demarcation of the area.

DGPS Coordinates:

Sl_No	Point_Id	Latitude	Longitude
1	K-01	18° 51' 45.43261" N	82° 56' 51.88652" E
2	K-02	18° 51' 45.86759" N	82° 56' 47.77238" E
3	K-03	18° 51' 46.31956" N	82° 56' 43.68439" E
4	K-04	18° 51' 46.70227" N	82° 56' 40.14960" E
5	K-05	18° 51' 47.12065" N	82° 56' 36.18115" E
6	K-06	18° 51' 47.53148" N	82° 56' 32.47415" E
7	K-07	18° 51' 50.72659" N	82° 56' 30.95694" E
8	K-08	18° 51' 54.34764" N	82° 56' 29.36001" E
9	K-09	18° 51' 57.95192" N	82° 56' 27.79178" E
10	K-10	18° 51' 58.62003" N	82° 56' 33.11905" E
11	K-11	18° 51' 55.05238" N	82° 56' 34.13041" E
12	K-12	18° 51' 53.25537" N	82° 56' 36.83043" E

13	K-13	18° 51' 51.75661" N	82° 56' 39.08344" E
14	K-14	18° 51' 50.67054" N	82° 56' 43.17478" E
15	K-15	18° 51' 49.46981" N	82° 56' 47.69092" E
16	K-16	18° 51' 49.05323" N	82° 56' 50.64555" E
17	K-17	18° 51' 48.75313" N	82° 56' 52.76236" E

Fencing:

To protect the plantation from grazing and other biotic interference, it is proposed to provide Vegetative fencing (Bamboo Twig and Thorns) along the entire length of periphery. The cost estimate for Vegetative fencing (Bamboo Twig and Thorns) has been provided in Annexure- II (Page no.- 23)

Site Clearance & Planting:

Plantation over 11.00 ha. shall be taken up with planting model of ANR @500 plants per hectares at spacing of 2.5 m x 2.5 m. Site clearance and cleaning to be done in the treatment area to create gap for plantation. Silvicultural cleaning by cutting of high stumps, removal of weeds, singling of multiple shoots, removal of plants in congested areas will be done, so that the plants get optimum condition for growth. All post planting measures like casualty replacement, soil working, manuring, fire protection etc. will be undertaken.

The materials so removed from the site clearance and SSO to be distributed among the villagers/VSS people. A register of distribution to be maintained at Range level.

Species:

Considering soil & moisture conditions, preference should be given on hardy indigenous species. For success of plantation in interior tribal areas, emphasis has been given on plantation of fruit and NTFP species. Considering the topography, soil and moisture availability of the plantation area, the following species will be planted.

Sl. no	Scientific **Name of species**	Common name	Sl.no	Scientific **Name of species**	Common name
1	*Terminalia arjuna*	Arjun	10	*Dalbergia sissoo*	Sissoo
2	*Azadirachta indica*	Neem	11	*Gmelina arborea*	Gambhari
3	*Pongamia pinata*	Karanja	12	*Dendrocalamus strictus*	Salia Bamboo
4	*Emblica oficinalis*	Amla	13	*Terminalia tomentosa*	Asana
5	*Terminalia belerica*	Bahada	14	*Madhuca indica*	Mahul
6	*Albizia lebbeck*	Sirisa	15	*Acacia catechu*	Khaira
7	*Zizyphus mauritania*	Barakoli	16	*Mangifera indica*	Mango
8	*Syzygium cumini*	Jamun	17	*Ficus benghalensis*	Bara
9	*Ficus religiosa*	Pipal	18	*Artocarpus heterophyllous*	Panasa

Soil and Moisture Conservation Works: -

Rain water harvesting, run off management and enhancement of percolation are the cardinal activities to improve infiltration of water for re-charging of ground aquifer. It enhances the moisture availability to the vegetation in forest eco-system. Soil and moisture conservation activities have been taken up in forestry in various scales and levels as a subsidiary activity and dovetailed to plantation and other afforestation activities. In order to improve water availability in Forests, it is to be practiced as core forestry activity independent of other forestry interventions.

The strategy adopted for rain water harvesting in forest areas is enumerated below-

(I) Forest Floor Treatment-

The forest floor is the catchment where the precipitation touches the ground and subsequently is drained through the drainage line. It forms the focus area in the rain water harvesting. Permissible interventions will not only capture the rain water but also enhance the retention period ultimately leading to increased infiltration. The Staggered Trenches primarily aims to break the run off. In a Ha. of land up to 300 nos. of Staggered Trenches will be created. The dimension of the Staggered Trenches will be 2.5mt. X 0.5 mt X 0.5 mt. It will help in conserving rain waters of that region and facilitate its percolation. Adequate care should be taken during alignment of such trenches so that gullies are not formed by the water flowing downhill from the edges of the Trench. The identified nalas will be treated, from top to bottom (ridge to valley) approach as per the specific site condition, which will retard the velocity of run-off and be helpful in recharging as well as feeding ground water to the plants planted below it.

(II) Drainage line Treatment-

The micro catchment drain the water into drainage line and rain water flows from the ridge to bottom and higher slope to lower slope in varying velocity. The primary objective of drainage line treatment is therefore, centres around reducing the velocity and increasing the retention of water at various levels. It is therefore, required to have appropriate interventions along drainage line to alter the pattern of rain water flow.

- **Loose Boulder Check Dams (LBCD):**

This structure will be created across the drainage line for retention of runoff and reduction of velocity. Such structures should preferably have top width of one meter with upstream slope of 1:1 and downstream slope of 1:5. The dimensions of each structure are dependent on several factors such as gradient, catchment size, etc. Hence, designs will be fixed with appropriate dimensions as per the size of the nallas on which it will be constructed..

- **LBCD with Wire Mesh:**

At very special locations, such a structure should be planed where boulders will be stacked on steps and width of the drainage line is very large. In such structure, the actual cost of the wire mesh will be added.

Strategy for Implementation:

The terrain of the RF is hilly and undulating. However the area identified has 1 no. of nala of 1st Order (primary nala) to be taken up for treatment. In order to achieve the objective and implement the programme efficiently, a well-planned strategy is indispensable. The entire area will be treated with major focus on the drainage line treatment by providing LBCD in the major nalas within the prescribed cost norm.

DRAINAGE LINE TREATMENT

LOOSE BOULDER CHECK DAM

(A) Size- 10' X 10' X 5'

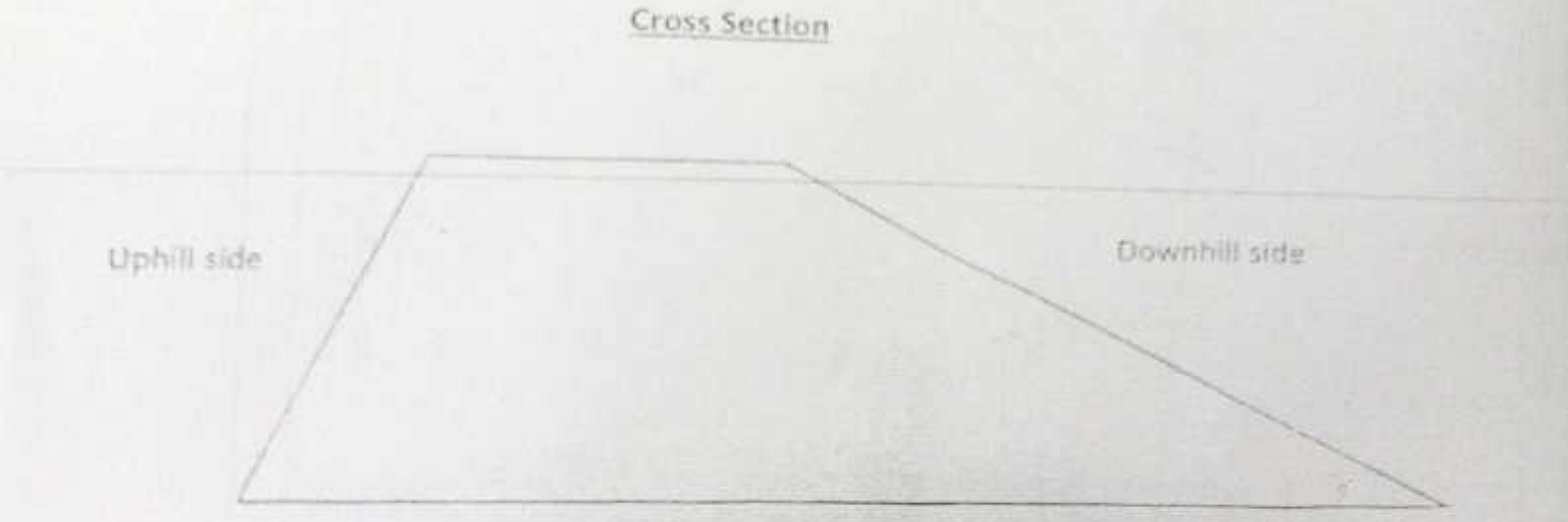
i. Requirement of boulder (**Procured from quarry**)

½ (10' + 4') x 10' x 5' = 350cft or 9.90 cum

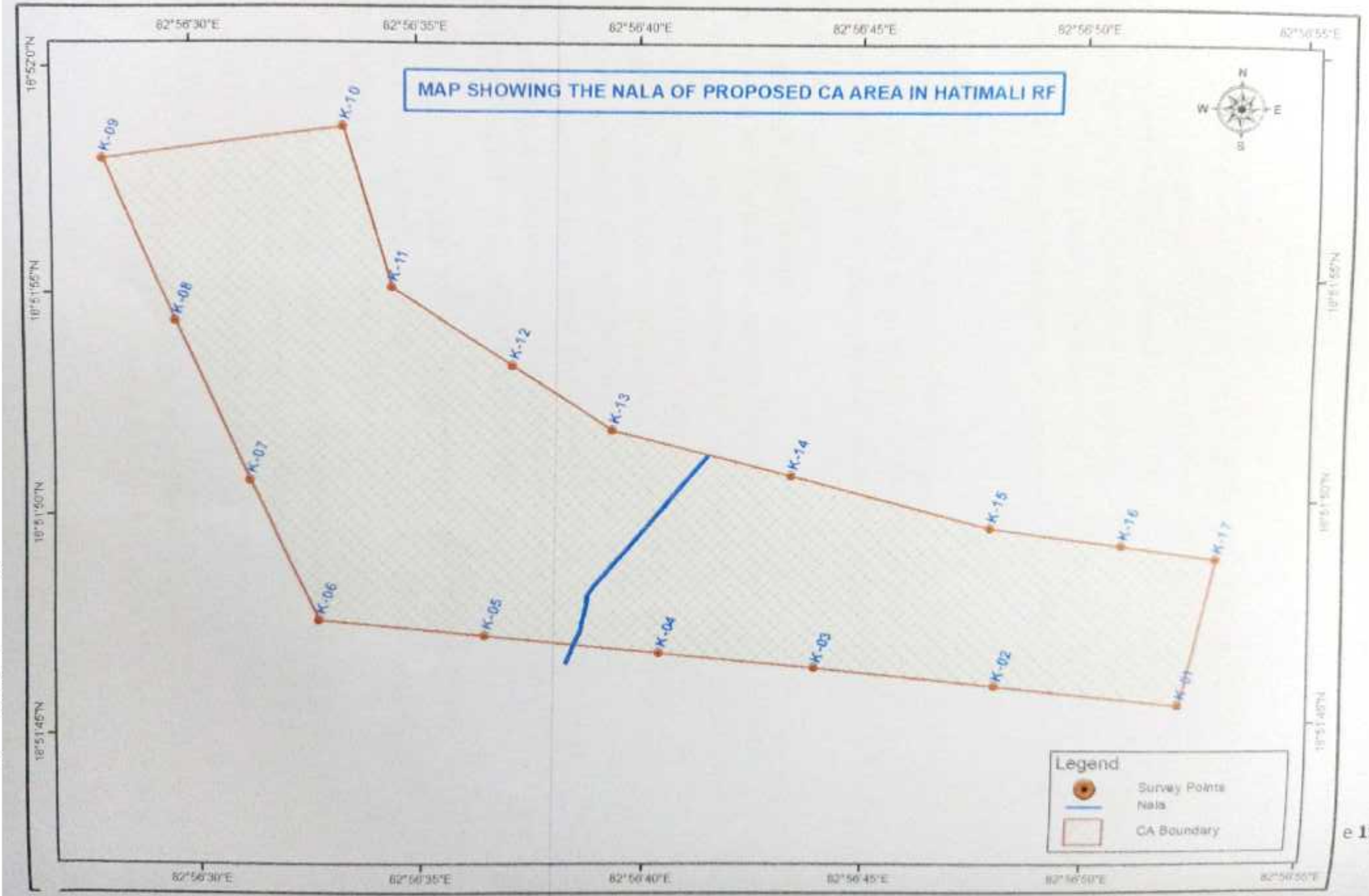
ii. Labour for construction of LBCD for 1 cum

Mulia	1.04 No.
Mason special	0.17 No.
Stone packer	0.35 No.

Design of LBCD



ap Showing Nala:



Protection of the plantation:

Vegetative fencing all along the periphery of the plantation will be provided. Few watchers will also be engaged for protection of the plantation. Assistance of V.S.S is necessary for better protection of plantation.

Peoples Participation:

In the recent times, no scheme shall be effective if the local villagers are not involved in the implementation of the scheme itself. The villagers who are having a right on the NTFP items in the adjoining forest area are to be associated with the implementation of the scheme at all different levels. For that, Van Samrakhyan Samiti (VSS) is proposed to be constituted in all the villages around the Compensatory Afforestation site. The villagers are to be motivated, inspired and above all, explained the benefits they will be getting, if plantation is protected by them.

EPA (Entry Point Activity):

To build the confidence of the local public and smooth execution of the works, Entry-Point Activities are proposed to orient the community members towards thrift and credit activities. EPA will be taken up after discussion with the nearby villages surrounding the CA areas.

Monitoring & Evaluation Mechanism:

The scheme shall be effective for a period of 10 years. The cost will be deposited by the user agency and work will be executed by the Divisional Forest Officer, Koraput Division with his staff and all prescribed records are to be maintained. In addition to internal monitoring by Forest Officers of State Government, a Monitoring Committee under item no. 3.4 (iii) of consolidated guidelines under F.C Act 1980 issued by MoEF & CC, shall be established with a nominee of the Central Government to oversee that the stipulations, including those pertaining to Compensatory Afforestation are carried out for Hatimali DPF.

AGENCY RESPONSIBLE FOR PLACEMENT OF FUNDS.

The user agency shall provide funds as per the approved CA Scheme and to be deposited in Adhoc CAMPA through e-portal.

AGENCY RESPONSIBLE FOR PLANTATION

The Territorial Wing of the Forest Department i.e. Divisional Forest Officer, Koraput Division shall execute the Compensatory Afforestation Plantation in the identified degraded forest land on receipt of allotment of funds from the competent authority.

Total Cost of the Project

The total cost of the project comes to Rs. **53,79,598.00 (Rupees : Fifty Three Lakh Seventy nine Thousand Five Hundred Ninety Eight only.),** as per onetime cost norm & Matrix for 2024-25.

Divisional Forest Officer
Koraput Division

Asst. Conservator of Forest
Koraput Forest Division
KORAPUT

FINANCIAL OUTLAY

Financial outlay of raising of Compensatory Afforestation Scheme over an area of 11.00 Ha. in ANR with Gap Plantation mode @ 500 plants / Ha. of degraded Reserved Forest Land in Koraput Forest Division to accommodate 5500 Nos, of plants. The said scheme has been prepared as per One Time Cost Norm for Compensatory Afforestation as approved By PCCF, Odisha Bhubaneswar vide his O.O No. 1109 dtd. 08.11.2021 with commencement of plantation from 2024-25.

Sl. No.	Description	Amount (Rs.)
1	Cost of Plantation ANR with Gap plantation @ 500 Plants per Ha. over 11.00 Ha, without Fencing @ Rs. 1,57,554/- per Ha. with provision of 10 years maintenance **(Annexure-I&II)**	17,33,094.00
2	SMC Activities like Staggered Trench, Percolation pit, Contour trench, Graded earthen bund, LBCD, Sub surface Dyke & WHS as per the slope & site requirement@ Rs, 41248/- per Ha. over 11.00 Ha. **(Annexure III & IV).**	4,53,728.00
3	Cost of Fencing for Compensatory Plantation raised inside the Forest Areas using Bamboo Twigs & Thorns (250 Rmt/ Ha.) @ Rs. 1,15,725/- per Ha. **(Annexure V & VI).**	12,72,975.00
4	Watering Provision with Desel Pump set with Bore Well (1Pump set + Bore well) @ Rs.5,53,688/- for 5 Ha with 05 years maintenance as per Matrix for Watering Model-W-II - **Annexure VII & VIII.** For 11 Ha = Rs.5,53,688/5 x 11 =	12,18,114.00
	Sub-Total	**46,77,911.00**
5	15% of the Total Plantation cost towards EPA/Incentive to VSS & Monitoring, Evaluation	7,01,687.00
	Grand Total	**53,79,598.00**
(Rupees : Fifty Three Lakh Seventy nine Thousand Five Hundred Ninety Eight only.)		

Asst. Conservator of Forest
Koraput Forest Division
KORAPUT

Divisional Forest Officer
Koraput Division.

STATE FOREST HEADQUARTERS
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS & HoFF, ODISHA
ARANYA BHAWAN, BHUBANESWAR-23.

OFFICE ORDER NO. 1109 /9F –(Misc)-387/2021
Dated, BBSR, the 18th November, 2021.

Sub: One-time Cost Norm for Compensatory Afforestation.

The issue of delay in Compensatory Afforestation (CA) Scheme due to half-yearly wage rate revision has been a cause of concern for a long time. The issue has been examined in detail and it is proposed that the Present Net Cost of the CA scheme spread over 10 years should be realized one time instead of revising the cost norm every time due to wage rate revision. Accordingly the trend of wage rate increase in Odisha from 1998 till 2021 for labour component have been calculated at 5% and the trend in increase in Consumer Price Index from 1998 to 2020 for material component has been calculated at 4.8%. However, in order to maintain uniformity, a trend rise of 5% has been taken into consideration for both labour and material component for preparing the Present Net Cost of the Compensatory Afforestation Scheme in the State.

2. It is therefore, decided to prepare Compensatory Afforestation Scheme on "One time Cost Norm basis" by delinking the CA Scheme to wage rate revision and material cost escalation for easy of doing business. The cost norm for Core Plantation for CA has been kept at par with departmental block plantation norm. In addition, different fencing models as well as different watering provision have been provided for addressing to the site-specific edaphic conditions in the State for preparation of the Compensatory Afforestation Scheme by the Divisional Forest Officers.

3. Accordingly, the following cost norms have been approved and annexed for different components under Compensatory Afforestation Scheme.

SL. No.	Description of the component	Annexure
1	Nursery cost norm for raising 1000 Forestry species (18 Months old)	Annexure -1
2	Nursery cost norm for raising 1000 nos. of Casuarina seedlings (6 Months old)	Annexure -2
3	Nursery cost norm for raising 1000 nos. of Mangrove seedlings (one year old) on sunken bed.	Annexure -3
4	Core Plantation cost norm for Compensatory Afforestation @1000 plants / ha. with 10 years maintenance	Annexure-4
5	Core Plantation cost norm for Compensatory Afforestation @1600 plants/ ha. with 10 years maintenance	Annexure-5
6	ANR cost norm for Compensatory Afforestation @200 plants/ ha.with 10 years maintenance	Annexure-6

7	ANR cost norm for Compensatory Afforestation @500 plants/ ha.with 10 years maintenance	Annexure-7
8	Core Casuarina Plantation cost norm for Compensatory Afforestation @2500 plants/ ha with 5 years maintenance	Annexure-8
9	Mangrove (potted seeding) cost norm for Compensatory Afforestation @ 2500 Plants cost / ha with 10 years maintenance	Annexure-9
10	Mangrove (Hypocotyls) cost norm for Compensatory Afforestation @4445 Plants cost/ ha with 10 years maintenance	Annexure-10
11	Cost Norm for Soil and Moisture Conservation (SMC) works.	Annexure-11

4. The above cost norm shall be the basis for raising the one-time demand for Compensatory Afforestation Scheme by DFO while processing the forest diversion proposals for approval under Forest (Conservation) Act,1980.

5. Since there will be time lag between the preparation of the CA Scheme and execution of the same in the field, the DFOs may, if felt necessary, seek revision of the CA Scheme by Nodal Wing of this office due to change in the site conditions at the time of implementation subject to over all ceiling of the payments already made by the User Agency. However, no additional demand shall be raised during the time of execution of the CA Scheme.

06.11.2021

(S. K. Ratho)
Principal Chief Conservator of Forests & HoFF,
Odisha.

18830 08.11.2021

Memo No._____Dt._____/

Copy forwarded to the Additional Chief Secretary, Govt. of Odisha, Forest, Environment and Climate Change for information and necessary action.

8.11.2021

18831 08.11.2021 APCCF (Forest Diversion & NO, FC Act)

Memo No._____Dt._____/

Copy forwarded to the PCCF(WL) & CWLW, Odisha/ PCCF(KL), Odisha/ Chairman, Biodiversity Board/ Chief Executive, RPRC/ PD,OFSDP/ MD, OFDC Ltd for information and necessary action.

APCCF (Forest Diversion & NO, FC Act)

18832 08.11.2021

Memo No._____Dt._____/

Copy forwarded to the Additional PCCF(Nodal & FC Act)/ PP&A/ ME&IV)/CAMPA O/0 PCCF, Odisha/ CCF (TD), Cuttack for information and necessary action.

18833 08.11.2021 APCCF (Forest Diversion & NO, FC Act)

Memo No._____Dt._____/

Copy forwarded to all RCCFs/ All DFOs (T&WL) for information and necessary action.

APCCF (Forest Diversion & NO, FC Act)

ANNEXURE-I

Base Cost Norms for Compensatory Afforestation through Aided Natural Regeneration (ANR) @ 500 Seedlings/Ha.						
WAGE RATE Rs- 311/- PER MANDAY						
Sl. No	Items of work	Preferable Period of Execution	No of Mandays	Labour Cost (In Rs.)	Matrial Cost (In Rs.)	Total cost (In Rs.)
0th Year (Advance work) Pre-Planting Operation						
1	Survey, Demarcation and Pillar posting	Nov/Dec	2	622	0	622
2	Preparation of Treatment Map (Digital Map)	Nov/Dec	1	311	100	411
3	Site preparation	Nov/Dec	2	622	0	622
4	Silvicultural operations including clearance of weed, cutting of climber, High stump cutting, singling of shoots & removal of cut out after drying from the field to blank space.	Jan/Feb	15	4665	0	4665
5	Alignment and stacking for digging of pits	Feb/Mar	1	311	0	311
6	Digging of pits (45 cm x 45 cm X 45 cm) in hard and gravelly soil	Feb/Mar	20	6220	0	6220
	Total		**41**	**12751**	**100**	**12851**
1st Year/Planting Year						
1	Refilling of pits by altering the dugout soil of the pits, application of organic compounds/ CDM/ FYM & mixing the same perfectly.	June/Jul	4	1244	2500	3744
2	Transportation of 18 months old polythene bag seedlings in hired truck /tractor from the permanent/Mega nursery to planting site including Loading & unloading. (Average lead of 10 Rkm) & Stacking the seedling @ Rs.6/ Seedling. (550 nos.)	Jul/Aug	0	0	3300	3300
3	Watering polythene bag seedlings at stacking site of plantation	Jul/Aug	1	311	0	311
4	Conveyance of polythene bag seedlings on head load from the stacking site to individual dugout pits within the planting site, applying insecticide, fertilizer & planting after scooping the soil with other applied materials and pressing the soil perfectly around the planted seedling.	Jul/Aug	11	3421	0	3421
5	Cost of Fertilizer & Insecticide (a)NPK/ Bio-fertilizer @ 50 gms/plant as basal dose = 25kg @ Rs.30/- per kg = Rs. 750.0 (b) Urea/Vermicompost/Mo Khata/any other fertilizer @ Rs. 375.00 (c) Insecticide/ Bio-pesticide @ 5 gms/plant = 2.5 kg @ Rs.150/- per kg = Rs. 375/-	Jul/Aug	0	0	1500	1500
6	Casualty Replacement @ 10% (50 nos.)	Jul/Aug	1.5	466.5	0.0	466.5
7	1st weeding & Manuring	Aug/Sept	5	1555	0	1555

Sl. No	Items of work	Preferable Period of Execution	No of Mandays	Labour Cost (In Rs.)	Matrial Cost (In Rs.)	Total cost (In Rs.)
8	2nd Weeding, Soil working (1mt. diametre around the plants) & Manuring	Oct/Nov	8	2488	0	2488
9	Fire line tracing & Inspection path	Feb/Mar	3	933	0	933
10	Watch & Ward including watering as per requirement	Aug/Mar	9	2488	0	2488
	Total		41.5	12906.5	7300.0	20206.5
	2nd Year Maintenance					
1	Transportation of 50 seedlings from Nursery to plantation site including loading, unloading & conveyance by Tractor @ Rs.6/- per seedlings	Jul	0.9	0.0	300.0	300.0
2	Casualty replacement	Jul	1.5	466.5	0.0	466.5
3	Cost of Fertilizer & Insecticide A] Cost of Insecticide/ Bio- pesticide(Themet/ Furate) @ 5 gms/plant = .25 Kg @ Rs.150/- per kg = Rs.37.50 B] Urea/NPK/Bio-fertilizer/Vermicompost/Mo Khata/any other fertilizer = Rs. 1400/-	July/Aug	0	0	1437.5	1437.5
4	Weeding (Complete weeding), Manuring & Soil working, (1mt. diametre around the plants)	Sep/Oct	8	2488	0	2488
5	Fire line tracing (2 m. wide fire line) & Inspection path	Feb/Mar	3	933	0	933
6	Watch & Ward including watering as per requirement	Apr/Mar	12	3732	0	3732
	Total		24.5	7619.5	1737.5	9357
	3rd Year Maintenance					
3	Cost of Fertilizer Urea/NPK/Bio-fertilizer/Vermicompost/Mo Khata/any other fertilizer= Rs. 1400/-	July/Aug	0	0	1400.0	1400.0
4	Weeding (Complete weeding), Manuring & Soil working, (1mt. diametre around the plants)	Sep/Oct	8	2488	0	2488
5	Fire line tracing (2 m. wide fire line) & Inspection path	Feb/Mar	3	933	0	933
6	Watch & Ward including watering as per requirement	Apr/Mar	12	3732		3732
	Total		23.0	7153.0	1400.0	8553.0
	4th Year Maintenance					
1	Fire line tracing (2 m. wide fire line) & Inspection path	Feb/Mar	3	933	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732	0	3732
	Total		15	4665	0	4665
	5th Year Maintenance					
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3.0	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
	Total		15.0	4665.0	0	4665
	6th Year Maintenance					
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
	Total		15.0	4665.0	0.0	4665.0
	7th Year Maintenance					
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
	Total		15.0	4665.0	0.0	4665.0
	8th Year Maintenance					
1	Fire line tracing (2 m. wide fire line over 400 m length) & cultural operation	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
	Total		15.0	4665.0	0.0	4665.0
	9th Year Maintenance					
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
	Total		15.0	4665.0	0.0	4665.0
	10th Year Maintenance					
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
	Total		15.0	4665.0	0.0	4665.0

Year wise Abstract of Cost Norm (showing seedling cost separately)

Sl. No	Items of work	Preferable Period of Execution	No of Mandays	Labour Cost (In Rs.)	Matrial Cost (In Rs.)	Total cost (In Rs.)	
Sl No	Year	No. person days	Labour cost @ Rs.311/-per day (Rs)	Material Cost	Monitoring Evaluation, Learning, Documentation and Other Contingency (5%) of (4+5)	Cost of Seedlings @Rs.50.31 per seedlings	TOTAL COST
1	2	3	4	5	6	7	8
1	0th year	41	12751.0	100.0	549.00	0.00	13400.00
2	1st year	41.5	12906.5	7300.0	993.50	27671.00	48871.00
3	2nd year	24.5	7619.5	1737.5	443.00	2516.00	12316.00
4	3rd year	23.0	7153.0	1400.0	347.00	0.00	8900.00
5	4th year	15	4665.0	0.0	135.00	0.00	4800.00
6	5th year	15	4665.0	0.0	135.00	0.00	4800.00
7	6th year	15	4665.0	0.0	135.00	0.00	4800.00
8	7th year	15	4665.0	0.0	135.00	0.00	4800.00
9	8th year	15	4665.0	0.0	135.00	0.00	4800.00
10	9th year	15	4665.0	0.0	135.00	0.00	4800.00
11	10th year	15	4665.0	0.0	135.00	0.00	4800.00
	Total:	235.0	73085.0	10537.5	3277.5	30187	117067.00

Note:

1. Priority must be given to the indigenous local species available nearby to the site of plantation.
2. 10 % indigenous fruit bearing trees must be preferred to Plantation.
3. Site specific Soil conservation work like LBCD, Gully Plugging, Staggered Trench, Contour Trench, Graded Bund, etc. may be taken up
4. Chain link fencing can be adopted in the CA plantation taken up outside the forest area and Bamboo twigs fencing may be preferred in CA plantations
5. Watering facilities for procurement of water & watering may be adopted as per the availability of water.
6. The Cost Norm of various items can be changed with the approval of the concerned RCCFs keeping the overall cost norm fixed for each Financial Year.

APCCF (Forest Diversion & NO, FC Act)

Annexure - II

Matrix for Model-II A (ANR-500 Plants/ Ha)

In Rupees

Sl. NO.	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	Total Cost
Base Norm		13400	48871	12316	8900	4600	4800	4800	4800	4800	4800	4800												
1	2021-22	13400	51315	13577	10303	5834	6126	6432	6754	7092	7446	7819											136098
2	2022-23		14373	53881	14236	10818	6126	6432	6754	7092	7447	7818	8210										142904
3	2023-24			14774	58575	14969	11359	6432	6754	7092	7447	7819	8209	8621									150051
4	2024-25				15513	59404	15717	11927	6754	7092	7447	7819	8210	8619	9052								157554
5	2025-26					16269	62374	16503	12523	7092	7447	7819	8210	8621	9050	9505							165433
6	2026-27						17103	65493	17328	13149	7447	7819	8210	8621	9057	9503	9980						173705
7	2027-28							17958	68765	18194	13806	7819	8210	8621	9052	9505	9978	10479					182390
8	2028-29								18856	72206	19104	14496	8210	8621	9052	9505	9980	10477	11003				191510
9	2029-30									19799	75816	20059	15221	8621	9052	9505	9980	10479	11001	11553			201086
10	2030-31										20789	79607	21062	15982	9052	9505	9980	10479	11003	11551	12131		211141

APCCF (Forest Diversion & NO, FC Act)

SMC Works Model-C			
Cost Norms for creation of Compensatory Afforestation with Stabilization of Soil & Conservation of Moisture (1000 Plants/ Ha.)			
WAGE RATE Rs- 311/- PER DAY			
Sl.No	Item of Works	Preferable Period of Execution	Total Cost
	0th Year (Pre-Planting Operation)		
1	Nil		0
	1st Year		
2	Soil Conservation measure structures like Staggered Trench, Percolation pit, Contour trench, Graded earthen bund, LBCD, Wire mesh /JBCD, Sub surface Dyke & WHS as per the slope & site requirment on LS	Apr/Sept	20,215
	2nd Year		
3	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
	3rd Year		
4	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
	4th Year		
5	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
	4th Year		
5	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
	Total		32,343.0

Abstract

Sl. No	Year	No. person days	Labour cost @ Rs. 311/-per day	Material Cost	Total cost (Rs.)
1	0th year	0.0	0.0	0.0	0.0
2	1st year	0.0	0.0	20,215.0	20,215.00
3	2nd year	0.0	0.0	3,032.00	3,032.00
4	3rd year	0.0	0.0	3,032.00	3,032.00
5	4th year	0.0	0.0	3,032.00	3,032.00
6	5th year	0.0	0.0	3,032.00	3,032.00
	Total	0.00	0.00	32,343.0	32,343.0

Different types of SMC structures may be taken up as per the scope & requirements of the plantation site out of the design & specification of different structures annexed along this document.

APCCF [Forest Diversion & NO, FC Act]

Annexure - (X)

Matrix for (SMC)

In Rupees

Sl. NO.	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
Base Norm		0	20215	3032	3032	3032	3032											
1	2021-22	0	21226	3342	3510	3685	3870											35633
2	2022-23		0	22287	3509	3686	3869	4064										37415
3	2023-24			0	23401	3684	3870	4062	4267									39284
4	2024-25				0	24571	3868	4064	4265	4480								41248
5	2025-26					0	25800	4061	4267	4478	4704							43310
6	2026-27						0	27090	4264	4480	4702	4939						45475
7	2027-28							0	28445	4477	4704	4937	5186					47749
8	2028-29								0	29867	4701	4939	5184	5445				50136
9	2029-30									0	31360	4936	5185	5443	5717			52642
10	2030-31										0	32928	5183	5445	5715	6003		55274

APCCF (Forest Diversion & NO, FC Act)

Fencing Model F-1

Fencing for Compensatory Plantation raised inside the Forest Areas using Bamboo Twigs & Thorns

WAGE RATE Rs- 311/- PER DAY

Sl. No	Items of work	Preferable Period of Execution	Man days	Wages	Material cost (Rs)	Total Cost (Rs. per Ha.)
	0th Year Maintenance					
1	NIL		0	0	0	0
	1st Year Maintenance					
1	Taking an average perimetre of 250 Rmt/Ha. @ 93.85/ mt. (Half bundle Bamboo Twigs/mt @ 120/Bundle) Labour: Material - 40:60 (approx)	Sept./Oct	30	9330	14133	23463.0
2	Bamboo Poles of 8' height at a distance of 2mt spacing to be fixed (2" uder soil & 2" above soil) 250/2 = 125+1 = 126 Nos. of Bamboo Poles 1 Bamboo (approx) 24" height = 3 poles 126/3 = 42 Bamboos @ 200/Bamboo	Sept./Oct		0	8400	8400.0
3	Preparation of Bamboo poles, Digging of holes of 2 ft. depth & fixing Bamboo poles @ 20 poles/ MD	Sept./Oct	6.5	2021.5		2021.5
4	Cost of Bamboo for tieing the Bamboo twigs row fence with double side two strand Bamboo batten (One 6" above ground and other one 4 ft" above ground) (250x2)/ 24= 21 Bamboo @ 200/ Bamboo	Sept./Oct		0	4200	4200.0
5	Making Bamboo batten, Finishing the Batten & Tieing the same on double strand on Coir rope etc. @ Rs.11/ Rmt.	Sept./Oct	9	2799		2799.0
6	Cost of coir rope @ Rs.0.125 kg/ Rmt 500x 0.125 kg= 62.5 kg @ Rs.70/Kg	Sept./Oct		0	4375	4375.0
7	Making one Bamboo Twigs gate with Bamboo frame			0	500.5	500.5
	TOTAL		45.5	14150.5	31608.5	45759.0
	Rate per running mt. 45759/ 250= 183/Rmt					
	2nd Year Maintenance					
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	1500	7720
	Rate per running mt. 7720/ 250= 30.88 or say Rs. 31-Rmt					
	3rd Year Maintenance					
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	5675	11895
	Rate per running mt. 11895/ 250= 47.58 or say Rs. 48-Rmt					
	4th Year Maintenance					
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	5675	11895
	Rate per running mt. 11895/ 250= 47.58 or say Rs. 48-Rmt					
	5th Year Maintenance					
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	5675	11895
	Rate per running mt. 11895/ 250= 47.58 or say Rs. 48-Rmt					

Abstract

Sl. No	Year	No. person days	Labour cost @ Rs. 311/- per day	Material Cost	Total cost (Rs.)
1	0th year	0.0	0.0	0.0	0.0
2	1st year	45.5	14150.5	31608.5	45759.0
3	2nd year	20.0	6220.0	1500.0	7720.0
4	3rd year	20.0	6220.0	5675.0	11895.0
5	4th year	20.0	6220.0	5675.0	11895.0
6	5th year	20.0	6220.0	5675.0	11895.0
	Total:	125.5	39030.5	50133.5	89164.0

APCCF (Forest Diversion & NO, FC Act)

Annexure - VI

Matrix for Model-F- I Fencing (Bamboo Twig)

In Rupees

Sl NO	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
Base Norm		0	45759	7720	11895	11895	11895											
1	2021-22	0	48047	8511	13770	14456	15181											99967
2	2022-23		0	50449	8937	14459	15181	15940										104966
3	2023-24			0	52971	9384	15182	15940	16737									110214
4	2024-25				0	55620	9853	15941	16737	17574								115725
5	2025-26					0	58401	10346	16738	17574	18453							121512
6	2026-27						0	61321	10863	17575	18453	19376						127588
7	2027-28							0	64387	11406	18454	19376	20345					133968
8	2028-29								0	67606	11976	19377	20345	21362				140666
9	2029-30									0	70986	12575	20346	21362	22430			147699
10	2030-31										0	74535	13204	21363	22430	23552		155084

APCCF (Forest Diversion & NO, FC Act)

Annexure - VII

Watering Model-W-II			
Watering provision to CA Plantation			
Diesel pump set with Bore well (1 pump set + Bore well for 5 Ha Plantation), Wage rate @ Rs.311/-			
Year of Installation (0th Year)			
1	Cost of Borewell	1,55,000	
2	Cost of Diesel pump set 5HP	60,000	
3	Diesel pump set & assessories like commander, Pipes, etc.	30,000	
4	Water Storage Tanks/ Flexible pipes	10,000	
		2,55,000	
Cost of Water per Plant (2,55,000/ 5000) = Rs. 51/- Cost of Water per Ha. = Rs. 51,000/-			51,000
1st Year Watering			
1	Recurring expenditure i.e Diesel, Mobil, Engine Oil, etc. for pumping Water -21 x 1000 =		21,000
2	Watering 1000 Plants (Nov-Mar.) @ 200 plants/MD with 7 days rotation 20 MD x 5 months = 100 MD x 311 =		31,100
		Total	**52,100**
2nd Year Watering			
1	Recurring expenditure i.e Diesel, Mobil, Engine Oil, etc. for pumping Water -21 x 1000 =		21,000
	Maintenance Diesel pump set etc. @ 15 % of the installation cost.		7,650
2	Watering 1000 Plants (April- June & Nov-Mar.- 8 months) @ 200 plants/MD with 7 days rotation 20 MD x 8 months = 160 MD x 311 =		49,760
		Total	**78,410**
3rd Year Watering			
1	Recurring expenditure i.e Diesel, Mobil, Engine Oil, etc. for pumping Water -21 x 1000 =		21,000
	Maintenance Diesel pump set etc. @ 15 % of the installation cost.		7,650
2	Watering 1000 Plants (April- June & Nov-Mar.- 8 months) @ 200 plants/MD with 7 days rotation 20 MD x 8 months = 160 MD x 311 =		49,760
		Total	**78,410**
4th Year Watering			
1	Recurring expenditure i.e Diesel, Mobil, Engine Oil, etc. for pumping Water -21 x 1000 =		21,000
	Maintenance Diesel pump set etc. @ 15 % of the installation cost.		7,650
2	Watering 1000 Plants (April- June & Nov-Mar.- 8 months) @ 200 plants/MD with 7 days rotation 20 MD x 8 months = 160 MD x 311 =		49,760
		Total	**78,410**
5th Year Watering			
1	Recurring expenditure i.e Diesel, Mobil, Engine Oil, etc. for pumping Water -21 x 1000 =		21,000
	Maintenance Diesel pump set etc. @ 15 % of the installation cost.		7,650
2	Watering 1000 Plants (April- June & Nov-Mar.- 8 months) @ 200 plants/MD with 7 days rotation 20 MD x 8 months = 160 MD x 311 =		49,760
		Total	**78,410**

Abstract

Sl. No	Year	No. person days	Labour cost @ Rs. 311/-per day	Material Cost	Total cost (Rs.)
1	0th year	0	0.0	51000.0	51000.0
2	1st year	100.0	31100.0	21000.0	52100.0
3	2nd year	160	49760.0	28650.0	78410.0
4	3rd year	160	49760.0	28650.0	78410.0
5	4th year	160	49760.0	28650.0	78410.0
6	5th year	160	49760.0	28650.0	78410.0
	Total:	**740**	**230140**	**186600**	**4,16,740**

APCCF/(Forest Diversion & NO, FC Act)

Annexure VIII

Matrix for Watering Model-W-II (Diesel Pumpset Fitted with Borewell) per Ha

In Rupees

Sl. NO	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
Base Norm		5100	52100	78410	78410	78410	78410											
1	2021-22	51000	54708	86439	90771	95307	100072											478294
2	2022-23		53550	97440	90761	95310	100072	105076										502209
3	2023-24			96228	90312	95299	100076	105076	110330									527321
4	2024-25				99039	93428	100064	105080	110330	115847								553688
5	2025-26					81991	86494	105067	110334	115847	121639							581372
6	2026-27						65091	89819	110320	115851	121639	127721						610441
7	2027-28							68346	73310	115836	121644	127721	134107					640964
8	2028-29								71763	76976	121628	127726	134107	140812				573012
9	2029-30									75351	80825	127709	134112	140817	147853			706662
10	2030-31										79119	84866	134094	140818	147853	155246		741996

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