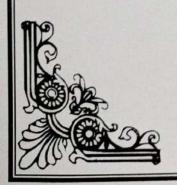




SCHEME FOR COMPENSATORY AFFORESTATION OVER
83.169 HA OF DEGRADED FOREST LAND UNDER KORAPUT
FOREST DIVISION IN LIEU OF DIVERSION OF 41.297 HA. OF
FOREST LAND

INVOLVED FOR CONSTRUCTION OF OVERLAND
CONVEYOR CORRIDOR SYSTEM CONNECTING POTTANGI
BAUXITE MINES TO ALUMINA REFINERY PLANT OF
M/S NALCO LTD., KORAPUT.





LAND SUITABILITY CERTIFICATE

This is to certify that 83.169 Ha. of degraded forest land in Rabalpadu DPF of Semiliguda Forest Range in Koraput Forest Division identified for Compensatory Afforestation in lieu of 41.297 Ha. of forest land required for diversion in view of proposal for construction of overland conveyor Corridor system for Pottangi Bauxite Mines by M/s. NALCO is suitable for Compensatory plantation. As per the site conditions and from management point of view the above said degraded forest land is suitable "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, Semiliguda Range.

Koraput Forest Division

KORAPUT

Divisional Forest Officer,
Koraput Forest Division

Koraput Forest Division

SCHEME FOR COMPENSATORY AFFORESTATION OVER 83.169 HA OF DEGRADED FOREST LAND UNDER KORAPUT FOREST DIVISION IN LIEU OF DIVERSION OF 41.297 HA. OF FOREST LAND INVOLVED FOR CONSTRUCTION OF OVERLAND CONVEYOR CORRIDOR SYSTEM CONNECTING POTTANGI BAUXITE MINES TO ALUMINA REFINARY PLANT OF M/S NALCO, KORAPUT.

Introduction: -

This scheme is prepared for Compensatory Afforestation in forest land in view of the diversion of the forest land of 41.297 Ha for construction of overland conveyor corridor system from Pottangi Bauxite Mines to Alumina Refinery, Damanjodi by M/s NALCO. M/s NALCO is a Central Government undertaking company which would serve for the transportation of bauxite ore from Pottangi Mines to their Alumina Refinery Unit at Damanjodi in the District of Koraput, Odisha. A total of 130.862 Ha of land is required for the project, out of which 41.297 Ha is forest land. The Crown Density of Degraded Forest Land identified for Compensatory Afforestation is below 30%. However, the user agency M/s NALCO has agreed to provide funds for raising the compensatory plantation over 83.169 Ha against the 41.297 Ha of forest land involved in the project.

> DETAILS OF LAND FOR COMPENSATORY AFFORESTATION

District- Koraput

Division-Koraput

Range- Semiliguda

The Degraded Forest land for compensatory afforestation has been identified in Rabalpadu DPF over 83.169 Ha under Semiliguda Range. The DFO Koraput Division vide his letter no.5460 dtd. 27.08.2021 allocated an area of 110.00 Ha. of Degraded Forest land for Compensatory afforestation propose. Out of which, 83.169 Ha has been identified and DGPS survey has been carried out and authentication by ORSAC has been issued vide letter no.3307 dtd.21.07.2023.

Land schedule of land prepared for Compensatory Afforestation.

Division	Range	Name of Forest Block	The extent of the area in Ha.	The proposed area for plantation in Ha.	Status
Koraput	Semiliguda	Rabalpadu DPF	154.7978	83.169	DPF

Description of Area:

i. Whether the site selected for compensatory Afforestation is a land bank or not:

This identified forest land is under the control of the Forest Department and classified as "Demarcated Protected Forest" and it is not coming under land bank area.

ii. If the CA Site is other than the land bank, reasons be given: -

There is no alternate suitable land available. Therefore, the Forest Land area has been selected for CA.

- iii. Soil type: -Loamy Soil.
- iv. Topography: -The topography configuration of the identified site is generally undulating and with hilly terrain.
- v. Slope: Gentle to moderate slope.
- vi. Whether the area is bearing any rootstock of vegetation: The area is having root stock of species like Kendu (Diospyros melanoxylon) Mahula (Madhuca indica), Kusum (Schleichera oleosa), Jamu (Syzygium cumini), Bela (Aegle marmelos), Panas (Artocarpus heterophyllus), Mango (Mangifera indica) with associate shrubs and herbs. Due to biotic interference, erratic rainfall, and prolonged heat conditions, the vegetation is in degraded condition. This results to bushy growth, pole size crop with scattered matured trees. The growing stock is struggling against the biotic interference like grazing, fire hazard, firewood collection by nearby villagers

etc. However, there is a potential for regeneration of the area if protection from biotic interference is being provided.

vii. Temperature: - The temperature in winter drops below 1° C at places like Pottangi otherwise it is in the range of 10° – 13° C in the valley plains. The summer season commences from March & continues till middle of June, The summer is quite pleasant here with the mean daily maximum temperature around 40° C while the mean daily minimum temperature is around 14° C

viii. Climate and Rainfall: - It is observed that about 80% of the total annual rainfall takes place due to Southwest monsoon between the middle of June & mid-October. The northeast monsoon gives erratic & insufficient rainfall. The average annual rainfall varies between 1320-1520 mm. The district is drought prone because of the erratic and uneven pattern of rainfall.

Plantation Model proposed: -

The identified site in Rabalpadu DPF is having loamy soil a gentle to moderate slope. The area is having root stock of species like Kendu (*Diospyros melanoxylon*) Mahula (*Madhuca indica*), Kusum (*Schleichera oleosa*), Jamu (*Syzygium cumini*), Bela (*Aegle marmelos*), Panas (*Artocarpus heterophyllus*), Mango (*Mangifera indica*) with associate shrubs and herbs. Due to biotic interference, erratic rainfall, and prolonged heat conditions, the vegetation is in degraded condition. This results to bushy growth, pole size crop with scattered matured trees. The growing stock is struggling against the biotic interference like grazing, fire hazard, firewood collection by nearby villagers etc. The site is having potential for regeneration of the area if proper protection from biotic interference is provided. Therefore, it is proposed for taking up ANR with gap plantation @ 500 plants/Ha in Rabalpadu DPF over 83.169 Ha.

The Characteristics of the land identified for CA plantation as per DSS analysis:

Site	VDF (in ha)	MDF (in ha)	Scrub (in ha)	Open forest (in ha)	N.F. (in ha)	Water (in ha)	Total (in ha)
Rabalpadu	0	0	33	0	50	0	83
Rabalpadu DPF	0	0	33	0	50	U	

The Decision Support System of Forest Survey of India reveals that out of total 83 Ha, 33 Ha comes under Scrub Forest and the rest 50 Ha under non-forest with weed growth. Owing to the above reason, Plantation Model i.e. ANR with gap plantation @ 500 plant/Ha has been proposed to restock the degraded forest land of Rabalpadu DPF.

GPS COORDINATES PROPOSED PLANTATION SITES

Map of the proposed plantation area is given as Plate-I. The plantation over 83.169 Ha shall be taken up as shown in the map. The GPS Coordinate of the patches is furnished as below.

RABALPADU DPF ANR With Gap @ 500/ Ha.

SL	MAP ID	EASTING	NORTHING	CA LAND BOUNDA LONGITUDE	LATITUDE
No.	1	716573.002	2050311.275	83°03'06.06776"	18°31'56.26937"
1	2	716562.901	2050407.921	83°03'05.76094"	18°31'59.41570"
2	2	716633.438	2050587.381	83°03'08.23510"	18°32'05.22495"
3	3		2050740.000	83°03'24.36934"	18°32'10.01268"
4	4	717104.999	2051267.884	83°03'28.79912"	18°32'27.13142"
5	5	717228.916	2051297.395	83°03'33.59285"	18°32'28.03889"
6	6	717369.199	2051297.393	83°03'39.43263"	18°32'23.77643"
7	7	717541.983		83°03'53.17998"	18°32'16.09462"
8	8	717947.911	2050936.687	83°03'36.16773"	18°31'49.93868"
9	9	717458.119	2050126.680		18°31'50.10763"
10	10	717434.199	2050131.602	83°03'35.35428"	
11	11	717056.151	2050209.042	83°03'22.49763"	18°31'52.76606"
12	12	716797.383	2050279.321	83°03'13.70407"	18°31'55.14721"

VEGETATION DENSITY:

The density of the crop of the above selected compensatory afforestation area is 0.1 to 0.3 in ANR Plantation site.

DESCRIPTION OF EXISTING VEGERATION

This area is covered with unwanted obnoxious weeds like Eupatorium and Lantana in the ANR site having weed growth of above species with some pole crops in scattered manner. No prominent economic species are available within the proposed ANR site. However, the area is having root stock of species like Kendu (Diospyros melanoxylon) Mahula (Madhuca indica), Kusum (Schleichera oleosa), Jamu (Syzygium cumini), Bela (Aegle marmelos), Panas (Artocarpus heterophyllus), Mango (Mangifera indica) with associate shrubs and herbs. Due to biotic interference, erratic rainfall, and prolonged heat conditions, the vegetation is in degraded condition. This results to bushy growth, pole size crop with scattered matured trees. The growing stock is struggling against the biotic interference like grazing, fire hazard, firewood collection by nearby villagers etc. The site is having potential for regeneration of the area if proper protection from biotic interference is provided. Therefore, it is proposed for taking up ANR with gap plantation @ 500 plants/Ha in Rabalpadu DPF over 83.169 Ha.

SURVEY & DEMARCATION

The area is to be surveyed in field with reference to the Forest map using GPS system and the survey as well as posting of RCC Pillar will be done by the user agency. The plantation area to be indicated by sign boards at corners or at point of intersection with roads, inspection paths and boundary lines. The sign boards would contain the name of the plantation site, area, year of planting, planting module, no. of seedlings planted, funding agency & other details, if necessary.

TECHNICAL DETAILS:

OBJECTIVE OF THE SCHEME:-

- (i) To restrict the degradation by reducing the biotic interference to barest minimum and reverse the trend towards the process of restoration of vegetation.
- (ii) To develop the forest by providing site specific silvicultural treatment.
- (iii) To facilitate the boosting of natural regeneration and ensure their establishment.

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- (iv) To take up appropriate soil moisture conservation (SMC) measures to improve the soil and moisture regime.
- (v) To improve the biodiversity of these blocks.
- (vi) To meet the need of the local villagers with regard to fire wood and small timber depending upon the productivity (from silvicultural operations like thinning, climber cutting, cutting of high stumps, double shoot cutting etc.)
- (vii) The pattern of plantation will be "ANR with 500 Plants per Ha." is to be carried out on the selected CA area in Rabalpadu DPF.

PLANTATION TECHNIQUE

The area should be well demarcated before raising plantation by GPS survey and fixing of Boundary pillar (where missing) by engraving thereon the co-ordinates and distance to next pillar. As far as possible weeds will be removed especially prior to flowering time in order to prevent fruiting and dispersal of seeds. Preferably indigenous species are to be planted in the area coupled with soil and moisture conservation measures.

PLANTING & POST-PLANTING

RAISING OF NURSERY

18th Month old seedlings will be planted on the selected CA site where the seedlings for the plantation shall be raised in the different Permanent Central nursery's of Semiliguda Range of Koraput Forest Division and transportation of seedlings shall be done from each CN to Plantation site during planting period. Further 10% extra seedlings shall be raised to compensate and mitigate the eventuality of seedling casualty in the nursery. Standard nursery practices shall be followed for raising seedlings in polythene bags. Permanent gaps need to be assessed well in advance where plantation can be done. Species like Gmelina arborea (Gambhar), Terminalia alata (Asan), Pongamia glabra (Karanj), Emblica officinalis (Amla), Kurum (Adina cordifolia), Panas (Artocarpus heterophyllus), Sissoo (Dalbergia sissoo) and other species as per the suitability of the sites will be preferred to be raised and planted on the site.

ALIGNMENT AND STACKING:

Alignment, stacking and pitting will be taken up in the month of January-February, pits of size 45cm X 45cm X 45cm will be dug maintaining a spacing of 2.5 mt. X 2.5 mt in perceptible gap areas of the ANR site.

PLANTING

The seedlings will be planted in dug out pits of 45 cm³maintaining a spacing of 2.5 mt between the pits i.e. @ 500 seedlings / Ha. in the ANR Plantation site. Plantation should be taken up after first regular shower of monsoon and should ideally be completed by end of July. NPK/DAP/etc. will be applied as per the plantation guideline in the norm for basal dose. Antitermite and insecticide applied per pit while planting. Casualty replacement whenever required during the planting year and in the subsequent years as per onetime cost norm should be undertaken for which the seedlings shall be raised and kept in stock at site as well as in the Central Nursery of the Semiliguda Range.

SPECIES TO BE PLANTED:

Species suitable for plantation should not only be able to flourish in the area but must also have rapid growth rate, evergreen habit, large crown volume and drought resistant. All these traits are difficult to get in a single species. Therefore, a combination of species has been taken into consideration. Although indigenous species are to be preferred in the plantation, considering adverse soil & moisture conditions we may go for hardy exotic species where required so that the plants are able to survive. Considering the topography, soil and moisture availability of the plantation area, the following species are suggested:

Sl. No	Name of species	Common Name	SI. No	Name of species	Common Name
1	Pongamia Pinata	Karanja	9	Artocarpus	Jackfruit
2	Emblica officinalis	Amla		hetrophyllus	
3	Gmelina arborea	Gambhari	_10	Syzygium cumini	Jamun
4	Dendrocalamus	Salia bamboo	11	Dalbergia sissoo	Sissoo
4	strictus	Sana bannoo	12	Anona Squamosa	Sitaphala
5	Tamarindus Indica	Tamarind	13	Nyctanthes arbor-	Gangaseuli
6	Adina cordifolia	Kuruma		tristis	
			14	Sapindus Mukorossi	Ritha
7	Cassia Fistula	Sunari	15	Baring tonia acutangula	Hinjal
			16	Careya arborea	Kumbhi
8	Mangifera indica	Mango	17	Choloroxylon swietenia	Bheru

PLANTING TECHNIQUES & MODEL

Out of the above species the intensity of plantation for Fuel yielding and Timber species will be planted 30:30% and Bamboo and Fruit yielding species in 10:30 ratio.

The planting of the above species shall be planted in such a manner that the long term fruit, timber yielding species/Bamboo shall be surrounded with short term fuel wood yielding species. The species should be planted alternate to each other & no repetition of species in close of pits shall be done.

WEEDING, SOIL WORKING AND MANURING

For establishment and better growth of the planted seedlings, weeding, soil working and manuring are necessary. It is prescribed to carry out one weeding, one soil working and manuring during the first year along with soil moisture conservation in the form of staggered trenches. One weeding, one soil working and application of fertilizer in second year of plantation weeding and manuring for the first and second year shall be carried out during August-September along with contour. Application of vermin compost shall be given preference. First weeding shall be carried out after the first pair of leaf of the planted species 9 | P a g e

have come up preferably in August. The detailed cost estimate of various operations to be taken up in Block & ANR plantation has been furnished below. Fire line should be drawn in order to avoid damage to the plants during fire season (February to June).

POINTS OF IMPORTANCE:

While taking up plantation, the following vital points shall be taken up for consideration:

- * All care should be taken to raise healthy seedlings of minimum 90cm to 100 cm Height and 10% extra of the required stock has to be raised. Pitting shall be invariably done during January-February, when the soil is moist by fall of dew. The sites being the hilly slopes, pits shall be dug along the contours. Planting shall be done at the onset of monsoon.
- * Basal dose fertilizer and insecticide can be applied at the time of planting. Casualty replacement, weeding and soil working, application of fertilizer and insecticides shall be taken up as per the provisions made in the cost norm at the proper time. Engaging requisite number of watchers as per norm is very vital and mandatory.
- * All out efforts be taken to keep the plantation free from grazing, fire and other biotic interference.
- * Two nos. of Watcher sheds to be constructed within the plantation site.
- * Transparency Sign Board with innovative ideas be constructed at conspicuous

The Schedule of operation for preparation of site, pre-planting planting, post-planting are prescribed herewith:-

OPERATIONS	PERIOD OF COMPLETION
Advance preparation of site	End of October
Alignment & Digging of pits	End of February
Stacking	End of February
Planting	1 st week of July
Casualty replacement	End of July
Soil working, weeding, manuring	End of August
Soil & Water conservation measuring	End of September
Fire line tracing	During December
Watch & Ward	July to March

Post Planting operation in 2nd Year

a. Casualty replacement, 1st weeding soil working & manuring

: End of July

b. Fire line tracing : During December c. Watch & Ward : Throughout the year

3rd Year

a. Weeding, Soilworking & application of manure : End of July b. Fire line tracing : December

c. Watch & Ward : Throughout the year

In 4th Year

a. Fire line tracing : End of December b. Pruning :September

c. Watch & Ward : Throughout the year

5th year to 10th year

: End of December d. Fire line tracing

: September e. Pruning

: Throughout the year f. Watch & Ward

WATERING

The watering provision is to be provided to the ANR CA Plantation sites for the period from November to March in 1st year, April to June and November to March from 2nd year to 5th year maintenance by the help of diesel pump sets to provide better growth of the plantation and to avoid damage due to hot sunlight or scarcity of water as well as to success of the plantation.

The cost norm of watering model W-II/Ha is enclosed.

WATCH & WARD

The important element of successful plantation is protection. Watchers are to be engaged on daily wage basis for ten years but they should assigned with specific work and their involvement in protecting the plantation should be ensured. It is suggested not to engage a particular person for the entire ten years but considering the work efficient the person, if not found suitable should be changed.

FENCING

To protect the plantation from grazing and other biotic interference, it will be provided **Bamboo twigs and thorns fencing** along the periphery of the ANR Plantation sites of the degraded Forest Land for better protection as well as survival of the Plantations.

The cost estimate for Bamboo Twig fencing/Ha as per Fencing Model F-I has been enclosed.

CONTROL MEASURES:

- 1) The nursery journal, the plantation journal and other records shall be maintained separately in accordance with the provision of "The Orissa Forest Plantation Manual 1977" indicating the physical and financial achievements. Necessary entries with regard to plantation activities undertaken shall be entered in the journals and shall be produced before the inspecting officers. In case of any eventuality like cyclone, thunder storm, hail storm etc, if caused destruction to the plantation, this should also be noted. It is also necessary to note the distribution of rain fall which not only helps in the growth of plants at site but also acts as a guideline for the ensuing years nursery schedule to be formulated.
- 2) For protection, measures shall be taken to save the plantation from fire incidence and prevent accidental trespass of cattle, goat etc, to the premises of the nursery. Boundary area will be scrapped to a width of 2 mtr. During February / March the cut materials are to be burnt under strict supervision.

SOIL MOISTURE CONVERVATION:

Soil and moisture conservation activities are essentially required to be dove-tailed to plantation activities in order to improve water availability in Forest. In order to achieve the objective and implement the programme efficiently a well planned strategy is essential. The natural slope of the Forest land selected for compensated Afforestation are varies from 0 degree to 35 degree being the foothill. The areas selected for the catchment where the precipitation touches the ground and subsequently drained through the drainage line. So this becomes the

focus area of the soil moisture conservation programme. The intervention suggested below is aimed at capturing the rain water to enhance the retention period and to increase the quantum of infiltration.

Forest Floor treatment:

- Staggered Trenches The staggered trenches are primarily aim to break the runoff which otherwise will form reels and gullies. Such reels when conversed will form gullies. Continuous gullies when joined together will form a ditch. Therefore it is aimed at excavating staggered trenches as per the field requirement during execution of works. Each such trench will be 2 m (length) X 0.5m (depth) X 0.5 (Width). These trenches will conserve rain water of this region and facilitates its percolation. Therefore while aligning such trenches adequate care should be taken so that gullies are not formed by the water flowing downhill from the wedges of trench.
- **Graded Earthen Bund** Earthen graded bunds can be erected on the low slope (<5%) Forest and pediments of hills. These bunds would be 1.5 Meter high (minimum) and follow a longitudinal slope of 0.2% to 0.5%. The purpose of these bunds is to guide the run off along a longer path to increase time of concentration and promote infiltration. Preferably burrow pits to be located on the upstream.

This can be laid on the border of Forest land or it can be on the where the bill slope ends and pediment begins. This bund will prevent direct entry of runoff from hills/forest into cultivable land. Its main purpose is to delay the runoff and increase the time of infiltration substantially. The alignment of the bund will be such that the flow path will be as wide as possible. This will provide sufficient width for the rain water to flow at shallow depth thus facilitating quick infiltration. Earth borrowed from the pits dug from the upstream should meet the requirement of earth work for the graded bund.

The burrow pits of this bund will be discontinuous and act as soak pits to enhance infiltration. Burrow pits may be located on the downstream side if sufficient earth is not available on the upstream.

The top of the bund will be discontinuous and act as sock pits to enhance infiltration. Burrow pits may be located on the downstream side if sufficient earth is not available on the upstream.

The top of the bund should have longitudinal slope of 0.2 to 0.5% so that the flow path is non-silting & non-erosive. If required Loose Boulder spurs would be put up across the flow path to control the longitudinal slope.

It may be noted that this bund is not to retain water for very long as in case of reservoir bunds. Its purpose is to change the direction of flow of runoff. Stone pitching on the upstream side may be necessary to prevent scouring by runoff coming downhill.

DRAINAGE LINE TREATMENT:

Drainage line treatment can be done on the site by Construction of Loose Boulder Structure, Wire mesh structure etc. as per the requirement of the sites where the structure is to be created across the drainage line for retention of runoff and reduction of velocity. Such structure should preferably have top width of 1m with upstream slope of 1:1 ratio and downstream slope ratio of 1:5 ratio.

<u>N.B.</u> Apart from the above proposed Soil and Moisture Conservation Measures the following site specific feasibly durable, visible & result oriented intervention are proposed.

- 1. Water Harvesting structure in the foot hill area.
- Cement Measures Check Dam in the foot hill area.
- 3. Sub-Surface Dyke.

The above SMC Structures are to be constructed as per site specification within the onetime cost norm of Rs. 39284.00 per hectare as per Matrix SMC 2023-24 for improving Soil and moisture regime.

FIRE LINE TRACING AND MAINTENANCE:

Fire causes heavy losses to the forest during fire session. To prevent incidence of fire, the entire plantation area shall be divided into suitable blocks by tracing fire lines. Boundaries of the plantation patches and these block lines will be scrapped of forest growth to a width of 3.0 mtr during February-March and the cut back materials and the dry leaves shall be stacked outside the plantation sites. This operation shall be carried out for the entire period of maintenance (10 years).

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PEOPLES PARTICIPATION: (EAP ACTIVITIES)

In order to involve the adjoining villages in the protection of plantation, meetings are to be conducted in the adjoining villages and efforts to be made to constitute VSS who will be assigned with the task of protection and management of the compensatory Afforestation with sharing benefit as per JFM Resolution 2011 and as amended thereof for all plantation site. For the above purpose supporting activities like livelihood improvement/Socio economic development of the VSS members, strengthening of the local level institutions. Capacity Building and local level training and Entry Point Activities (EPA) is to be conducted on every VSS of the plantation site. For the success of the above and to create Assets for the communities and to improve the socio economic status through lively hood options during the project implementation period this will be met from 15% funds of the CA cost which is to be provided by the User Agency as per the provision provided by the Divisional Forest Officer, Koraput to strengthen the VSS's in the locality.

MONITORING & EVALUATION:

The Range Officer of project implementing Range will undertake field checks of the works undertaken at the identified site and will be cross checked by the Asst. Conservator of Forests (ACFs) and Divisional Forest Officer, Koraput Forest Division. GPS co-ordinates along with other required information of Compensatory Afforestation and other activities will be uploaded in the e-Green Watch Portal of NIC, MoEF and CC, Govt. of India for the purpose of online monitoring, Annual progress of plantation involving growth of planted seedlings, survival percentage etc will be monitored and recorded in the plantation journal by the field staffs of project implanting Ranges and reported to the Divisional Forest Officer for necessary action. The same will be reported to higher authorities for monitoring and evaluation of the activities every year. Further steps may be taken for intermediary evaluation & monitoring of the said plantation through superior officer, evaluation team as and when planned & Proposed in this regard.

EXECUTING AGENCY

The work will be executed by the Forest Department.

Cost norm for ANR with gap plantation @ 500 seedlings/Ha is given in Annexure-I.

The matrix for Compensatory Afforestation Through Aided Natural Regeneration (ANR) @ 500 Seedlings/Ha. is given in Annexure II.

The cost norm of Bamboo twig & thorns fencing (Fencing Model F-I of cost norm for CA communicated by the PCCF, Odisha) is given in Annexure-III.

The Matrix for fencing for the year 2023-24 with 10-year maintenance is also given in Annexure-IV.

The cost norm of watering (Watering Model W-II of cost norm for CA – Bore well fitted with diesel pump set) is given in **Annexure-V**.

The Matrix for watering model W-II is also given in Annexure-VI.

The cost norm for Soil & Moisture Conservation (SMC works) is given in Annexure-VII.

The Matrix for Soil & Moisture Conservation is given in Annexure-VIII.

FINANCIAL OUTLAY TOTAL PROJECT COST OF THE COMPENSATORY AFFORESTATION PLANTATION SCHEME

Sl. No.	Plantation type	Extent area in Ha/Rmt etc.	Cost Norm per Ha. (Rs.)	Total cost (Rs.)	Remarks
1	ANR With Gap Plantation @ 500 Plants/Ha as per Matrix of onetime cost norm 2023-24	83.169	150051	12479592.00	
2	Provision for Bamboo Twig Fencing as per onetime cost norm Model F-I for 2023-24	83.169	110214	9166388.00	Rs. 68769951.00 is
3	Provision for Watering as per onetime cost norm Model W-II for 2023-24 for planting 500 nos. of plants per ha. Taking into account of nos. of plants to be planted per ha. under ANR Gap Plantation @500 plants accordingly calculation has been made. 527321/2=263660 per ha.	83.169	263660	21928380.00	to be deposited in the Adhoc CAMPA Account
4	Provision for SMC as per onetime cost norm for 2023-24	83.169	39284	3267211.00	1
	Total			4,68,41,571.00	
3	Strengthening of the VSS of the adjoi EPA/Activities/Incentive, etc., for 10	ning CA sites year, i.e., 15	with provision of % of the CA cost	70,26,235.00	Cost of EPA Activities to be deposited as per the direction of DFO, Koraput
			Grand Total:	5,38,67,806.00	Internal Control

Funding Agency

: M/s NALCO

Total cost of the project: - The total cost of the project will be Rs. 5,38,67,806/- (Rupees Five Crore Thirty Eight Lakh Sixty-seven Thousand Eight Hundred Six) only, which shall be payable by the User Agency as per the advice of Divisional Forest Officer, Koraput.

Asst. Conservator of Forests,
Asst. Comput Forest Poreston

Koraput Forest Division

Divisional Forest Officer,
Divisional Forest Division
Koraput Forest Division
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LOGISTIC SUPPORT IN KIND TO BE PROVIDED BY THE USER AGENCY AS PER THE FIELD REQUIREMENT.

2 Nos. of Bolero Neo vehicle is suggested for monitoring and supervision of the CA and other allied works of the mining project, which will be supplied by the User Agency to the Divisional Forest Officer, Koraput Forest Division.

Asst. Conservator of Forests,
Koraput Forest Division
Asst. Conservator of Forest
Koraput Forest Division

Divisional Forest Officer,
Koraput Forest Division
Divisional Forest Officer
Koraput Forest Division

Annexure I

COST NORM FOR COMPENSATORY AFFORESTATION THROUGH AIDED NATURAL REGENERATION (ANR) @ 500 SEEDLINGS/Ha.

WAGE RATE RS. 345/- PER MANDAY

SI. No	Items of work	Prefera ble period of executio n	No of man-days	Labour Cost (in Rs.)	Materi al Cost (in Rs.)	Total Cost (in Rs.)
	0th Year (Adva	nce work) Pi	re-Plantir	ig Operation	n	
1	Survey, Demarcation and pillar posting	Nov/Dec	2.00	690.00	0.00	690.00
2	Preparation of Treatment Map (Digital Map)	Nov/Dec	1.00	345.00	100.00	445.00
3	Site Preparation (Cleaning & removal of debris)	Nov/Dec	2.00	690.00	0.00	690.00
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	15.00	5175.00	0.00	5175.00
5	Alignment and stacking of pits	Feb/Mar	1.00	345.00	0.00	345.00
6	Digging of pits (45cm*45cm*45cm) in hard gravelly soil	Feb/Mar	20.00	6900.00	0.00	6900.00
	Total		41.00	14145.00	100.00	14245.00

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	4.00	1380.00	2500.0	3880.00
2	Transportation of 18 months old polythene bag seedling in hired truck/tractor from the permanent/Mega nursery planting site including Loading & unloading. (Average lead of 10 Rkm) & stacking the seedling@ Rs.6 per seedling. (550 nos.)	Jul/Aug	0.00	0.00	3300.0	3300.00
3	Watering polypot seedlings at planting site	Jul/Aug	1.00	345.00	0.00	345.00
4	Conveyance of polythene bag seedling on head load from the stacking site to individual dugout pits within the planting site, applying insecticides, fertilizer & planting after scooping the soil with other applied materials & pressing the soil perfectly around the planted seedling.	Jul/Aug	11.00	3795.00	0.00	3795.00

	seedling					
1	Transportation of 50seedlings from nursery to plantation site including Loading, unloading & conveyance by tractor @ Rs.6 per	July	0.00	0.00	300.00	300.00
		Year Maint	enance			
	Total		41.50	14317.50	7300.0	21617.50
10	Watch & Ward including watering as per requirement	Aug- Mar	8.00	2760.00	0.00	2760.00
9	Fire line tracing & Inspection path	Feb/Mar	3.00	1035.00	0.00	1035.00
8	2nd weeding, soil working (1mt. Diameter around the plants) & manuring	Oct/ Nov	8.00	2760.00	0.00	2760.00
7	1st weeding and manuring	Aug/Sep	5.00	1725.00	0.00	1725.00
6	Casualty replacement @ 10% (50 Nos)	Jul/Aug	1.50	517.50	0.00	517.50
5	Cost of fertilizer and insecticide (a) NPK/Bio-fertilizer @ 50gms/plant as basal dose=50kg@Rs.30/-per kg=Rs. 750 (b) Urea/Vermicompost/Mo Khata/ any other fertilizer in two subsequent doses@ Rs. 375.00. (c)Insecticide/Bio-pesticide@5hms/plant=1kg@Rs.1 50/- per kg=Rs. 375.00	Jul/Aug	0.00	0.00	1500.0	1500.00

3	Cost of fertilizer and insecticide A) Cost of insecticide/ Bio- pesticide @ 5gms/plant=0.5 kg @Rs. 150/-per kg=Rs.37.50/- B) Urea/NPK/Bio- fertilizer/Vermicompost/Mo khata/any other fertilizer=Rs. 1400/-	July	0.00	0.00	1437.50	1437.50
4	Weeding(complete weeding), manuring & soil working, (1mt. Diameteraround the plants)	Sep/Oct	8.00	2760.00	0.00	2760.00
5	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Mar	3.00	1035.00	0.00	1035.00
6	Watch & Ward including watering as per requirement	Apr-Mar	12.00	4140.00	0.00	4140.00
	Total		24.50	8452.50	1737.50	10190.00
	3rd	Year maint	enance			
1	Cost of fertilizer (Urea/NPK/Bio- fertilizer/Vermicompost/Mokhata/ any other fertilizer)	July/Au	0.00	0.00	1400.00	1400.00
2	Weeding(complete weeding), manuring & soil working, (1mt. Diameteraround the plants)	Sep/Oct	8.00	2760.00	0.00	2760.00
3	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Mar ch	3.00	1035.00	0.00	1035.00
4	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.0		9335.00
	Total	1	23.00	7935.0	00 1400.00	9335.00

4th Year Maintenance

	Fire line					
1	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Marc h	3.00	1035.00	0.00	1035.00
2	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.00		
	Total		12.00	4140.00	0.00	4140.00
			15.00	5175.00	0.00	5175.00
	Fire line traci	Year Maint	enance		LNam	E 144 JUL 14
1	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Marc h	3.00	1035.00	0.00	1035.00
2	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.00	0.00	4140.00
	Total		15.00	5175.00	0.00	5175.00
	6th	Year mainte	nance			
1	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Marc	3.00	1035.00	0.00	1035.00
3	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.00	0.00	4140.00
	Total	ME TO THE	15.00	5175.00	0.00	5175.00
	7th	Year mainte	nance			
1	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Marc	3.00	1035.00	0.00	1035.00
2	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.00	0.00	4140.00
	Total		15.00	5175.00	0.00	5175.00
	8th	Year mainte	nance			
1	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Marc	3.00	1035.00	0.00	1035.00
2	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.00	0.00	4140.00
1 0 9	Total		15.00	5175.00	0.00	5175.00

	9th	Year maint	enance			
1	line over 400 m long) & inspection path	Feb/Marc	3.00	1035.00	0.00	1035.00
2	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.00	0.00	4140.00
	Total		15.00	5175.00	0.00	5175.00
	10th	Year maint	enance		- November	
1	Fire line tracing (2 m. wide fire line over 400 m long) & inspection path	Feb/Marc	3.00	1035.00	0.00	1035.00
2	Watch & Ward including watering as per requirement	Apr/Mar	12.00	4140.00	0.00	4140.00
	Total		15.00	5175.00	0.00	5175.00

				Absti	ract	l de la constante de la consta	
SI. No.	Year	No. Person days	Labour Cost (In Rs.)	Material Cost (In Rs.)	Monitoring, Evaluation, Learning, documentation and other Contingency (5%) of (4+5)	Cost of seedling@ Rs. 50.31 per seedling	Total cost (In Rs.)
1	2	3	4	5	6	7	8
1	0th Year	41.00	14145.00	100.00	712.25	0.00	14957.25
2	1st Year	41.50	14317.50	7300.00	1080.88	27671.00	50369.38
3	2nd Year	24.50	8452.50	1737.50	509.50	2516.00	13215.50
4	3rd year	23.00	7935.00	1400.00	466.75	0.00	9801.75
5	4th year	15.00	5175.00	0.00	258.75	0.00	5433.75
6	5th year	15.00	5175.00	0.00	258.75	0.00	5433.75
7	6th year	15.00	5175.00	0.00	258.75	0.00	5433.75
8	7th year	15.00	5175.00	0.00	258.75	0.00	5433.75
9	8th year	15.00	5175.00	0.00	258.75	0.00	5433.75
10	9th year	15.00	5175.00	0.00	258.75	0.00	5433.75
11	10th year	15.00	5175.00	0.00	258.75	0.00	5433.75
	Total:-	235.00	81075.00	10537.50	4580.63	30187.00	126380.13

Annexure-II

138

in Rupees

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

																					-	_	
51.	Commence men: Year	*	11	III	IV	٧	VI	VII	VII	1%	×	жі	XII	XXII	жv	XW	KVI	XVII	жуш	X/IS	ж	XXI	Total Cost
841	e Norm	13400	48871	12316	8900	4800	4800	4800	4800	4800	4800	4800											136098
1	2021-22	13400	51315	13577	10303	5834	5125	8432	6754	7091	7446	7,819											130001
-			24070	canni	24775	THE REAL PROPERTY.	8176	6432	6754	7052	7007	1818	6210										142904
2	2022-23		14070	53881	14256	10318	9110	Bays.	07.34		Table 1												150051
3	2023-24			14774	56575	14969	11359	6432	5754	7,093	7447	1819	8709	8621									
	2024-25				15512	15404	19717	51927	6754	7091	7647	7819	8210	2619	8092								157554
4	2024-23		-	-	-								8210	8621	8050	9506							195433
5	2025-26					16289	67874	16503	12503	7092	7447	1819	96304	12/2/2-4									173765
5	2025-27						17103	65493	17328	13149	7447	1819	8210	2621	9052	95.09	9980						
			-		-	-		17958	68758	18154	13806	1219	8210	8621	3052	99:25	2978	10479					187390
7	2027-28						1	FLADE	00720					and the same	9052	100,700	12790	10477	1.033				191510
8	2028-29								38858	72205	19707	14496	8210	8621	96554	-		-					201086
										19729	75816	20059	15821	8621	9052	9520	9980	10479	11001	12552			Emme
9	2029-91				4	-	-	1				79907	21062	15982	4092	9535	9980	10479	1,003	11551	12131		211141
10	2030-3	1	1	1	1	1	-	1			20785	2 Manual 1				1_	-	-	-				

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Annexure III

	Fen	cing Mode F	-I			
Fenc	ing for Compensatory Plantation r	aised inside t & Thorns	he Fore	st Areas u	sing Bamb	oo Twigs
	WAGE RA	ΓΕ Rs-345/-	PER DA	Y		
SI No	Items of work	Preferable Period of Execution	Man days	Wages	Materia I cost (Rs)	Total Cost (Rs. Per Ha.)
	0th Y	ear Mainten	ance			
1	NIL		0	0	0	0
	1st Y	ear Mainten	ance			
1	Taking an average perimeter of 250 Rmt/Ha. @93.85/ mt. (Half bundle Bamboo Twigs/ mt @120/Bundle) Labour: Material = 40:60 (approx)	Sept./Oct	30.0	10350.0	14133.0	24483.00
2	Bamboo Poles of 8 height at a distance of 2mtspacing to be fixed (2" under soil & 2" above soil) 250/2=125+1=126 Nos. of Bamboo poles 1Bamboo (approx) 24" height= 3 poles 126/3= 42 Bamboos @ 200/Bamboo	Sept./Oct		0.00	8400.00	8400.00
3	Preparation of Bamboo poles, Digging of holes of 2 ft. depth & fixing Bamboo poles @20 poles/MD	Sept./Oct	6.50	2242.50		2242.50

1	Bamboo Twigs fence including	Feb./Mar	20	6900.00	3073.00	123/3.00
	Repair & Maintenance of	D.1. (7.1	20	6000.00	5675.00	12575.00
	3rd	Year Mainte	nance			
Rat	e per running mt.7720/250=30.88 o	or say Rs.31-I	Rmt			
	Material cost					
1	Bamboo Twigs fence including	Feb./Mar	20	6900.00	1500.00	8400.00
	Repair & Maintenance of					
300		Year Mainter	nance			
Rat	e per running mt. 45759/250= 183/1	Rmt				
	TOTAL		0	0	0	47306.00
	Will Bullioto Haine		45.5	15697.5	31608.5	
7	Making one Bamboo Twigs gate with Bamboo frame	Sept./Oct		0.00	500.50	500.50
	Rs.70/kg					
6	kg/Rmt 500x0.125 kg= 62.5 kg @	Sept./Oct		0.00	4375.00	4375.00
	Cost of coir rope @ Rs. 0.125					
	double strand on Coir rope etc. @ Rs.11/Rmt.	Sept./Oct	9.00	3103.00		3105.00
5	the Batten & Tieing the same on	Sept./Oct	9.00	3105.00		2105.00
	Making Bamboo batten, Finishing					
	Bamboo @200/					
	other one 4ft" above ground) (250x2)/24=21 Bamboo @200/				1200.00	4200.00
4	batten (One 6" above ground and	Sept./Oct		0.00	4200.00	4200.00
	double side two strand Bamboo					
	Cost of Bamboo for tieing the Bamboo twigs row fence with					

	4th	Year Mainten:	ance			
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6900.00	5675.00	12575.00
Rate	e per running mt.11895/250=47.58 5th	or say Rs.48- Year Mainten				
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6900.00	5675.00	12575.00

	Abstract										
SI No.	Year	No. Person days	Labour cost @ Rs. 345/- per day	Material Cost	Total cost (Rs.)						
1	0th year	0	0.00	0.00	0.00						
2	1st Year	45.5	15697.50	31608.50	47306.00						
3	2nd year	20	6900.00	1500.00	8400.00						
4	3rd year	20	6900.00	5675.00	12575.00						
5	4th year	20	6900.00	5675.00	12575.00						
6	5th year	20	6900.00	5675.00	12575.00						
	Total	125.5	43297.50	50133.50	93431.00						

Annexure-IV

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

contrasts ment Year		*	201	W	٧	VI	প্যা	VII	TK .	×	ж	XII	300	X/V	XV	XVI	Yotal Cost
ase Norm	0	45759	7720	11895	11895	13895					_		-	-	-		99967
2021-22	0	48047	R531	33750	14458	18181											
2022-23		0	50445	8987	14459	19181	15940										104906
2023-24			0	52901	9384	15322	15940	16737									150234
2024-2				10	55,520	9853	15947	26737	17974								119725
		-	1		0.	58602	10346	16738	17574	38453							121812
2025-3		-	-			0	61321	10863	17675	1845E	19375						127588
2026-2	7				1	-			11100	1,6434	19376	20345					233068
2027-	18					1	1 2	54387	12406	11606	19377	20843	21392				14066
g 2025	29							8	97666		12575	20346	21363	33630			54040
9 3029	30							-	3	30686	74935		75363	12430	28552		19608

APCCF (Forest Diversion & NO, FC Act)

Annexure V

	Watering Model-W-II	
	Watering Provision 4 Co.	
Die	esel Pump set with Bore well (1 pump set +Bore well for 5 Ha Plantation), Wage	
	Pamp Set +Bore well for 5 Ha Plantation), Wage	rate @
	RS. 345/-	
	Year of Installation (0th Year)	
1	Cost of Borewell	1,50,00
2	Cost of Diesel pump set 5HP	60,000
3	Diesel pump set & accessories like commander, Pipes, etc.	30,000
4	Water Storage Tanks/ Flexible pipes	15,000
	2,5	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 345 =	34,500
	Total	55,500
	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 x8 months = 160 MDx 345=	55,200
	Total	83,850

	Recurring expenditure i.e., Diesel, Mobil, Engine oil, etc, for pumping Water-21 x 1000=	
	i.e., Diesel, Mobil, Engine oil, etc. for pumping W	
	Wantenance Diesel Pump set etc. (2) 150/	21,000
	Watering 1000 Plants (April, June 8 N	7,650
	Watering 1000 Plants (April- June & Nov- Mar - 8 months) @ 200 plants/MD with 7 days rotation	
	20 MD x8 months =160 MDx 345=	55,200
	Total	83,850
1	4th Year Watering	
	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
	Watering 1000 Plants (April- June & Nov- Mar - 8 months) @ 200 plants/MD	
2	with 7 days rotation	55,200
	20 MD x8 months =160 MDx 345=	
	Total	83,850
	5th Year Watering	
1	Recurring expenditure i.e., Diesel, Mobil, Engine oil, etc, for pumping Water-21 x 1000=	21,000
T BE	Maintenance Diesel Pump set etc. @ 15% of the installation cost.	7,650
	Watering 1000 Plants (April- June & Nov- Mar - 8 months) @ 200 plants/MD	
2	with 7 days rotation	55,200
	20 MD x8 months = 160 MDx 345=	
	Total	83,850

Abstract									
Sl. No.	Year	No. Person days	Labour cost @ Rs. 345/- per day	Material Cost (In Rs.)	Total cost (Rs.)				
		0	0	51000	51000				
1	0th year	0		21000	55500				
2	1st Year	100	34500	28650	83850				
3	2nd year	160	55200		83850				
4	3rd year	160	55200	28650					
		160	55200	28650	83850				
5	4th year		55200	28650	83850				
6	5th year	160		186600	441900				
	Total	740	255300	10000					

Annexure-VI

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

																	In Rapers
SI.	Commerce ment Year	1	я	161	N	٧	W	Vii	Vite	žΧ	х	XI	XII	XIII	χΝ	xv xv	Total Cost
Pa	se Norm	5100	52100	78410	78410	78410	78410										478794
1	2021-22	51000	54705	86430	90771	95307	100077										502209
2	2022-23		52350	57440	90751	99310	100072	105076						-	-		527301
	2023-24			562.78	50317	95709	100076	105076	Trozed					-			553688
-	2024-25				59039	63328	100054	102080	110330	115847			9.71	_			581377
	2075-25					61993	86494	105067	110334	125847	121.639						610441
!	70/3-25						63091	69819	110320	115852	121639	127721					640964
6	2026-27			-				68346	73510	115836	121644	127721	134107				
7	2027-28							-	71753	76976	121628	127725	134107	1 40812			673032
8	2028-29								71745	75.351	80825	127709	134112	140811	147853		705-67
9	2029-30									22.307	75119	34866	134054	1,40818	147853	135746	74199
10		+												1			

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Annexure VII

	Conservation of Moisture (1000 plants/ha) WAGE RATE Rs. 345/- PER DAY									
	TIGE RATE RS. 345/- PER DAY									
SI.		Preferable								
No.		Period of	Total							
110.	Item of Works	Execution	Cost							
	Oth Year (Pre-Planning Operation)									
1	Nil		0							
1 11	1st Year									
2	Soil Conservation measure structures like Staggered Trench, Percolation pit, Contour trench, Graded earthen bund, LBCD, Wire mesh LBCD, Sub surface Dyke & WHS as per the slope & site requirement on LS	Apr/Sept.	20,215.00							
	2nd Year									
3	Maintenance of SMC structures @ 15% of initial year cost	Apr/Jul	3032.00							
	3rd Year									
4	Maintenance of SMC structures @ 15% of initial year cost	Apr/Jul	3032.00							
	4th Year									
5	Maintenance of SMC structures @ 15% of initial year cost	Apr/Jul	3032.00							

	5th Year		
6	Maintenance of SMC structures @ 15% of initial year cost	Apr/Jul	3032.00
	Total		32,343.00

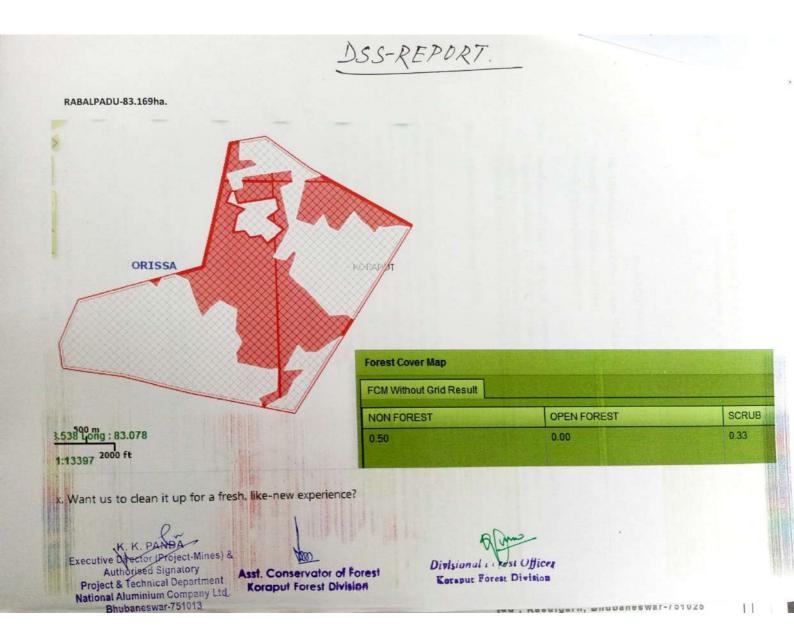
Abstract											
SI. No.	Year	No. Person days	Labour cost @ Rs. 345/- per day	Material Cost (In Rs.)	Total cost (Rs.)						
1	0th year	0	0	0.0	0.0						
2	1st Year	0	0	20,215.00	20,215.00						
3	2nd year	0	0	3,032.00	3,032.00						
4	3rd year	0	0	3,032.00	3,032.00						
5	4th year	0	0	3,032.00	3,032.00						
6	5th year	0	0	3,032.00	3,032.00						
	Total	0	0	32,343.00	32,343.00						

Annexure-VIII

		ARREST STATE OF THE PARTY OF TH
Matrix	Sec. o	15 8 6 6 7
DURTHE	LOI	SHVILLI

																		in supers
9. NO.	Commence ment Year	1	11	m	IV	v	V)	V2	Vill	(X	×	×I	XII	30 (XIV	ΧΛ	yvi	Total Cov:
64	se Norm	0	20215	30302	3012	3082	3032											39633
1	2021-23	0	21226	33/0	3510	3685	35.00					4						59033
2	2022-28		0	2229.7	3589	3686	3869	4064										37415
3	2023-24			ā	23403	3684	36,763	4060	45.67									39284
4	2024-25				c	24971	38.68	0.764	4205	∆4342								41248
5	2025-25			The second second	100000000000000000000000000000000000000	α	25800	4261	41,87	4478	475							48310
6	2026-27						D	27090	42/64	4493	470	9939					-	45475
7	2027-28							0	28645	44.77	670=	4937	5286					42749
8	2026-29								0	29867	470	1939	5184	5445				50136
	2028-20			-	-	-	-	-		6	31360	4936	5186	5443	5717			52642
9	2029-30							-	-			10000	2107	5445	5715	6003		55274
10	2030-31										ā	32928	3783	43.40			1	1

APCCF (Forest Diversion & NO, FC Act)





ODISHA SPACE APPLICATIONS CENTRE (ORSAC)

Department of Science & Technology, Government of Odisha

To

ORSAC/DGPS-FD/1079/2022 (P-II)/3367 (2) dt. 21 7 23

The Divisional Forest Officer- cum- Wildlife Warden,

Koraput Forest Division, Koraput

Email: dfo.koraput@odisha.gov.in

Sub: Verification of DGPS survey of Compensatory Afforestation land identified in degraded Rabalpadu D.P.F under Koraput Forest Division in lieu of forest areas proposed for diversion for Overland Conveyor Corridor from Pottangi bauxite Nines to Alumina Refinery of M/s NALCO in Koraput district.

Ref: Your letter no. 3199. dated 7.7.2023

Sir.

With reference to the above it is to inform you that, the DGPS Survey map and data of the Compensatory Afforestation land identified in degraded Rabalpadu D.P.F under Koraput Forest Division in lieu of forest areas proposed for diversion for Overland Conveyor Corridor from Pottangi bauxite Nines to Alumina Refinery of M/s NALCO in Koraput district has been verified by ORSAC and is certified that the map is correct at a confidence level of 95%. All the Compensatory Afforestation land identified degraded forest land comes in Rabalpadu D.P.F under Koraput Forest Division. Total Compensatory Afforestation land works out to 83.169Ha. (Rabalpadu D.P.F) through detailed survey and from the submitted .shp files, as mentioned in the submitted record.

Deceded

Thanking You.

Encl: One hard copy map

Yours faithfully

(M. K. Sanabada) Scientist 'E.'

CB 17123

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