

COMPENSATORY
AFFORESTATION SCHEME
OVER
11.5 HA OF RESERVE FOREST LAND
IN NORTHERN RF COMPT NO.24 UNDER HANDAPA RANGE
OF
ATHMALLIK FOREST DIVISION

(5750 Seedlings)

AGAINST DIVERSION OF FOREST LAND 4.837 Ha.
FOR CONSTRUCTION OF 132/33 KV TRANSMISSION LINE FROM GRID SUB-
STATION BOUDH TO PROPOSED 220/132/33 KV GRID SUB-STATION AT
KIAKATA.

(AS PER ONE TIME COST NORM BASIS)

Prepared by

Divisional Forest Officer,
Athmallik Forest Division.

Detailed scheme for Compensatory Afforestation to be carried out over 11.5 ha in Northern RF Compt No.24 of Handapa Range under this Division in lieu of diversion of 4.837 Ha forest land for construction of 132/33 KV Transmission Line from Grid Sub-station Boudh to proposed 220/132/33 KV Grid Sub-station at Kiakata.

The area proposed for diversion is coming under **Athamalik and Boudh Forest Division**. Total area of forest land to be diverted is **5.127 Ha** out of which **0.290 Ha** of forest land is coming under **Boudh Forest Division** and **4.837 Ha** of forest land is coming under **Athamalik Forest Division**.

The Compensatory Afforestation land has been identified over degraded forest land in Northern RF Compt No.24 of Handapa Range under Athmalik Forest Division.

According to the para-2 of the guideline No. 1109/9F-(Misc.)-387/2021 dt. 08.11.2021 by PCCF (N), Compensatory Afforestation has been prepared on "one time cost norm basis" by delinking the CA scheme to wage rate revision and material cost escalation for ease of doing business.

The field verification conducted by Forest Officials suggested 500 plants per ha. Hence, the base cost norm for Compensatory Afforestation (ANR Plantation) H 500 plants per hectare (18 months old seedlings) as per the Guideline issued by PCCF, Odisha vide letter dt. 08.11.2021 and letter dt. 01.12.2021 has been considered. Soil & moisture conservation activities have been provided separately as per the approved cost Norm by PCCF, Odisha. Also, water provision aided by solar system with bore well (1 system for 5 ha plantation) fitted with Drip system has also been provided. As area is inside Notified Forest land and can be prone to encroachment and other biotic pressures, chain link fencing has been suggested as per the actual requirement.

1. Details of degraded forest land

Sl. No.	Range	Location	Area available	Remarks
1	Handapa	Northern RF Compt. No.24	11.5	Suitable for ANR 500 Plantation

The maps showing the land details for the proposed compensatory afforestation are enclosed in the Diversion Proposal. DGPS Surveyed Map for CA area authenticated by ORSAC and G.P.S co-ordinates of survey stations of Compensatory Afforestation area are enclosed in the Diversion Proposal.

2. Description of Area

- I. Whether the site selected for Compensatory Afforestation is a land bank or not: This identified Reserve forest area is under the control of Forest Department and classified as 'Reserved Forest'. It is not a land bank.
- II. If the CA site is other than the land bank, reasons be given: No land bank has been established yet for this purpose.
- III. In case of non forest area identified for CA, then what is the distance of CA site from the adjoining forest boundary: No, the area is situated in Reserved Forest.
- IV. Soil type: Top soil is sandy loam having good retention capacity of water. Besides, adequate rooted waste of Sat and associates like Asan, Kuruma, Bija, Kasi, Moi, Dhaura etc. is visible. [Soil Map]
- V. Topography:
 - a) Hilly/Undulating/Plain: The Compensatory Afforestation sites are hilly and undulating.
 - b) Slope: Steep/Medium/Gentle: The sites selected for Compensatory Afforestation have medium to gentle slope. [Slope Map]
- VI. Whether the area is bearing any root stock of vegetation: The sites selected for Compensatory Afforestation are either barren or with weed growth like *Lantana*, *Eupatorium*, *Woodfordia fruticosa*, *Combretum decandrum*. Root stock of any principal species.

3. Plantation Model: -

Since the area is suitable for ANR plantation, 500 plants per hectare will be raised over 11.5 ha. with Maintenance of plantation for 10 years.

4. Technical details: Technical details of Compensatory Afforestation Scheme are as follows:

a) General Details:

Survey & Demarcation of boundary:

The identified area has been surveyed by DGPS (map attached) and the area will be demarcated with RCC pillars of size 1.75 mtr x 30 cm x 30 cm. This work will be done by the Forest Department at Project cost.

Fencing:

To protect the plantation from grazing and other biotic interference, it will be provided with Chain Link wire mesh fence, the cost for which will be deposited by the User Agency. Chain Link wire mesh fencing will be done around the entire patch as per the cost norm provided by the PCCF, Odisha vide Guideline dt. 08.11.2021 and dt. 01.12.2021. A total of 2875 meter of chain link fencing will be required.

Planting and post-planting:

ANR plantation shall be taken up with 500 plants per hectares (18 months old seedlings) at spacing of 2.5 m x 2.5 m. Alignment and pit marking should be done carefully in slopes so that the horizontal distance between plants in a row remains 2.5 mtrs and not the distance measured along the slope. Size of pits will be 45 cm X 45 cm X 45 cm.. All post planting measures like casualty replacement, soil working, manuring, fire protection etc. will be undertaken. The plantation area should be divided into 4 ha plots. These plots should be demarcated in the field before digging of pits so that the demarcating line does not cross a plantation row.

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

- Care to be taken to raise healthy seedlings of minimum 60 cm height. 10% extra seedlings are to be raised for replacement of casualty.
- Pitting shall invariably be done during November-February i.e., before onset of monsoon. If possible, the soil of upper portion and lower portion of pit should be placed separately in specific direction so that while planting the pits will be filled with top-soil first.
- Planting shall be done on the onset of monsoon to get full benefit of monsoon rain and planting should never be delayed.
- Basal dose of NPK and Chlorpyrifos dust per plant should be applied at the time of planting carefully by mixing with top-soil so that the roots of seedlings do not come in direct contact with fertilizer.
- In case of any mortality of planted seedlings, it should be replaced with good seedlings as soon as possible for better success rate.
- Complete weeding in proper time will be done. Strip weeding will not be permitted.
- Soil-working and application of 2nd dose fertilizer of NPK should be done in time.

Since the area is provided with chain link fence, watch & ward will be easier and the watchers may be engaged in weeding in problematic areas along with watch & ward.

b) **Species:** Although indlgenous 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. Plantation of fruit and NTFP species plays a great role since economic species have a little value for local people. Considering the topography, soil and moisture availability of the plantation area, the following species will be planted.

Sl.No.	Name of species	Common name
1	<i>Azadirachta indica</i>	Neem
2	<i>Dalbergiasissoo</i>	Sissoo
3	<i>Artocarpus heterophyllus</i>	Jack fruit
4	<i>Derris indica</i>	Karanja
5	<i>Terminalia tomentosa</i>	Asan
6	<i>Dendrocalamus strictus</i>	Bamboo
7	<i>Emblica officinalis</i>	Amla
8	<i>Gritelina arborea</i>	Gambhari
9	<i>Mangifera indica</i>	Mango

d) **Protection of the plantation:** Chain link mesh fence will be provided all along the periphery of the plantation in two patches. Few watchers will also be engaged for protection of the plantation.

e) **Watering provision of CA plantation:** Watering of the plantation will be carried out aided by solar Borewell fitted with drip system (1 system for 5 ha plantation as per one time cost norm).

5. **Proposed Monitoring Mechanism:** The scheme shall be executed by the Divisional Forest Officer, Athmallik Division with his staff and all prescribed records are to be maintained. In addition to internal monitoring by Forest Officials of State Government, a Monitoring Committee under item no. 3.4 (iii) of consolidated guidelines under F.C Act 1980 issued by MoEF, shall be established with a nominee of the Central Government to oversee that the stipulations, including those pertaining to Compensatory Afforestation are carried out.

6. **Total cost of the project:** The total cost of the project is Rs. 10832828/- (Rupees One Crore Eight Lakh Thirty Two Thousand Eight Hundred Twenty Eight) only which shall be payable by the user agency as per demand of the D.F.O, Athmallik Division.


 Divisional Forest Officer,
 Athmallik Forest Division
 Athmallik Division

Compensatory Afforestation Scheme for plantation of 5750 Nos. seedling over an area of 11.5 Ha. of Reserve Forest Land in Norther RF Compt No.24 of Handapa Range under Athmallik Forest Division.

PERFORMA (Norm for 1.00 ha.)

Sl. No.	Component	Unit	Base rate for commencement year 2024-25
1	ANR @ 500 Plant per ha.	Hectare	157554
2	Watering, Solar Borewell fitted with Drip System	Hectare	257751
3	SMC	Hectare	41248
4	Fencing (Iron angle with Chain link wire mesh)	per 250 meters	485432
	Total		941985

**Matrix for Compensatory Afforestation Scheme for plantation of 500 Nos. seedling
over an area of one Ha. - Year Wise**

Year	Financial Year	ANR @ 500 Plant per ha.	Watering, Solar Borewell fitted with Drip System	SMC	Fencing (Iron angle with Chain link wire mesh) (250 meter per hectare)	Total
1	2	3	4	5	6	9
0th year	2024-25	15513	189255	0	330630	535398
1st year	2025-26	59404	0	24571	0	83975
2nd year	2026-27	15717	10432	3868	14037	44054
3rd year	2027-28	11927	10955	4064	14742	41688
4th year	2029-30	6754	11502	4265	15478	37999
5th year	2030-31	7092	35607	4480	16252	63431
6th year	2031-32	7447	0	0	17064	24511
7th year	2032-33	7819	0	0	17918	25737
8th year	2033-34	8210	0	0	18814	27024
9th year	2034-35	8619	0	0	19754	28373
10th year	2035-36	9052	0	0	20743	29795
GRAND TOTAL		157554	257751	41248	485432	941985

Year	Financial Year	ANR @ 500 Plant per ha.	Watering, Solar Borewell fitted with Drip System	SMC	Fencing (Iron angle with Chain link wire mesh) (2875 Rmt along the perimeter = 11.2 times of 250 meter)	Total
1	2	3	4	5	6	7
0th year	2023-24	178399.5	2176432.5	0	3802245	6157077
1st year	2024-25	683146	0	282566.5	0	965712.5
2nd year	2025-26	180745.5	119968	44482	161425.5	506621
3rd year	2026-27	137160.5	125982.5	46736	169533	479412
4th year	2027-28	77671	132273	49047.5	177997	436988.5
5th year	2029-30	81558	409480.5	51520	186898	729456.5
6th year	2030-31	85640.5	0	0	196236	281876.5
7th year	2031-32	89918.5	0	0	206057	295975.5
8th year	2032-33	94415	0	0	216361	310776
9th year	2033-34	99118.5	0	0	227171	326289.5
10th year	2034-35	104098	0	0	238544.5	342642.5
GRAND TOTAL		1811871	2964136.5	474352	5582468	10832827.5

Grand Total Rs. 10832827.5/- or Rs. 10832828/- (Rupees One Crore Eight Lakh Thirty Two Thousand Eight Hundred Twenty Eight) Only.

Divisional Forest Officer,
Athmalik Forest Division
Athmalik Division