

COMPENSATORY AFFORESTATION SCHEME PROPOSALS FOR IMPROVEMENT OF DOUBLE THE DEGRADED FOREST LAND (694.159X2) IN GANGARAM RANGE IN LIEU OF DIVERSION OF 1388.318 HA FOREST LAND IN CHINTAGUDA RESERVE FOREST OF GANGARAM RANGE OF GUDURU (W.L.M.) DIVISION FOR KOYAGUDEM OCP-III MINE IN FAVOUR OF M/s. SINGARENI COLLIERIES COMPANY LTD...



I. INTRODUCTION:

The Principal Chief Conservator of Forests, A.P., Hyderabad vide Rc.No.20948/2008/FCA-5, Dt:18.07.2017 informed that the GOI, MoEF, Chennai, F.No.4-APA 230/200BAN/1550, Dt:29.10.2015 have issued status of CPSU to M/s. Singareni Collieries Company Limited as a “Central Public Sector Undertaking” (CPSU) and also informed that as per guidelines 3.2(IX(a)), the CPSUs are exempted from providing CA land. In lieu of CA on non forest land, the user agency shall re-afforest double the extent of degraded forest in the RF. The Principal Chief Conservator of Forests, Telangana State, Hyderabad vide reference No. 4806/2016/FCA/PS, dt:18.11.2016 has also issued instructions to identify double the degraded forest land in Mahabubabad District (694.159x2 = 1388.318 Ha) and to prepare the CA Scheme proposals. Accordingly, the Forest Range Officer, Gangaram identified the following degraded forest areas and certified the suitability. The details are as follows.

Sl. No.	Range	Bit No.	Beat	Section	Block	Compt. No.	Net area available
1	Gangaram	1	Mamidiguda (North)	Mamidiguda	Chintaguda	929,931/1	73.02
2		2	Mamidiguda (North)	Mamidiguda		929,931/1	98.77
3		3	Mamidiguda (North)	Mamidiguda		931/1	64.35
4		4	Kamaram (North)	Mamidiguda		933	34.23
5		5	Mamidiguda (North) and Kamaram (North)	Mamidiguda		933, 931/1	29.26
6		6	Kamaram (North), Mamidiguda (West)	Komatlaguda		925, 927, 932, 934, 935	110.028
7		7	Kamaram (North)	Komatlaguda		932, 933, 934	67.03
8		8	Kamaram (North) Mamidiguda (West)	Komatlaguda, Mamidiguda		927, 928	53.7
9		9	Jangalapalli (East), Jangalapally (North), Kamaram.	Komatlaguda, Mamidiguda		895, 897, 898, 911, 912, 913, 915, 925	555.64
10		10	Andugulagudem	Andugulagudem		900, 901	302.29
		Degraded forest land identified in 1 block to an extent of 1388.318 Ha.				Total :	1388.318

In lieu of diversion of Forest land over an extent 694.159 Ha. for Koyagudem OCP-III in Chatakonda Reserve Forest of Kothagudem Forest Division, an extent of 1388.318 Ha. (Double the Degraded Forest Area) is proposed for treatment and improvement in Gangaram Range of Guduru (W.L.M.) Division.

The degraded forest area where the growth is less than 0.4 density is proposed for treatment under Afforestation Scheme including Raising of plantations, Soil and Moisture Conservation works and Reserve Forest Boundary Demarcation.

Certain degraded areas, comprise of Barren Hillocks are proposed for Raising of Barren Hill Afforestation plantations. Digging of Continuous Peripheral Trench all along the boundary of the degraded forest block area and other protective operations are proposed to be taken up with a twin objective of moisture conservation, improvement of existing growth and boundary demarcation. Scheme is prepared with an outlay of **Rs. 8800.797 Lakhs** for development of Degraded Forest area.

Accordingly, an Action Plan for raising of Compensatory Afforestation plantations in degraded forest areas of Compt. Nos. 929, 931/1, 933, 925, 927, 932, 934, 935, 928, 895, 897, 898, 911, 912, 913, 915, 925, 900 and 901 of Chintaguda Reserve Forest of Mamidiguda Section of Gangaram Range of Guduru (W.L.M.) Division is Prepared with an outlay of **Rs. 8800.797 Lakhs** for raising miscellaneous Plantations and related activities.

PROJECT COST:

The total financial out lay of the project is as follows:

S.No	Scheme Proposals	Cost in Lakhs
1	Forest Protection including Fire protection & SMC works.	202.035
2	Compensatory Afforestation in Degraded Forest Area	5687.784
3	Soil and Moisture Conservation Plan	126.960
4	Wildlife mitigation and man animal conflict reduction measures - Bio-Diversity restoration	304.500
5	Rehabilitation and density improvement in degraded area	1030
6	Nursery infrastructure	37.950
7	Awareness Programme	17.107
8	Monitoring of Wild Life Improvement	25.00
9	Administrative Cost	369.461
	Total:	7800.797

LOCATION OF THE AREA PROPOSED FOR COMPENSATORY AFFORESTATION IN DEGRADED FOREST AREA:

A: The Compensatory Afforestation Scheme is aimed at improvement of the density and ultimately quality of Forests. With this in mind, degraded Forest areas of Compt. Nos. 929, 931/1, 933, 925, 927, 932, 934, 935, 928, 895, 897, 898, 911, 912, 913, 915, 925, 900 and 901 of Chintaguda Reserve Forest of Gangaram Range of Guduru (W.L.M.) Division is proposed for treatment. In general the above Compartments are having good degraded and coppice natural growth of Billudu, Nalla Maddi, Vepa, Tuniki, Chennangi, Kodisa, Tirumanu, etc. Natural regeneration is taking place but due to continuous biotic pressure on the land and fire it is not getting established.

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It is proposed to stabilize such growth. Suitable areas were identified for treatment with appropriate interventions as the area has become degraded due to excessive biotic interference. The excess biotic interference has disturbed the ecological cycle as all the Bio-diversity including fauna and flora have been damaged to a great extent. The area is part of Pakhal Wild Life Sanctuary and there is every need to rehabilitate and protect the environment for the sake of Bio-diversity. Number of cattle enter into the Forests from nearby villages for grazing and uncontrolled removal of fuelwood and poles for household purposes.

LEGAL STATUS OF THE PROPOSED CA AREA:

The proposed CA areas in Compt. Nos. 929, 931/1, 933, 925, 927, 932, 934, 935, 928, 895, 897, 898, 911, 912, 913, 915, 925, 900 and 901 of Chintaguda Reserve Forest of Mamidiguda, Andugulagudem and Komatlaguda Section of Gangaram Range of Guduru (W.L.M.) Division are notified Under Section 15 of Andhra Pradesh Forest Act, 1967 vide G.O. Ms. No. 668, dated 08.07.1355F respectively.

The compartment wise areas are as follows:

Sl. No.	Bit No.	Compt. No.	Reserved Forest Block	Total Area of the Block (In Ha)	Net area proposed for treatment available (In Ha)
1	1	929,931/1	Chintaguda RF	18363.12	73.02
2	2	929,931/1			98.77
3	3	931/1			64.35
4	4	933			34.23
5	5	933, 931/1			29.26
6	6	925, 927, 932, 934, 935			110.028
7	7	932, 933, 934			67.03
8	8	927, 928			53.7
9	9	895, 897, 898, 911, 912, 913, 915, 925			555.64
10	10	900, 901			302.29
				G-Total:	1388.318

The Compartment wise areas selected for CA treatment are as follows:

Sl. No.	Block	Compt. No.	Total Area	Net area available for CA	Species in the area
1	Chintaguda (Black soil, Sandy loam & some hillocks)	929	164.57	73.02	The area is covered with degraded coppice growth of misc.species like Billudu, Nalla Maddi, Vepa, Tuniki, Chennangi, Kodisa,
2		931/1	300.02	163.12	
3		933	135.18	63.49	
4		925	527.77	22	
5		927	291.04	22	
6		932	314.69	45.34	

7		934	121.86	43.718	Tirumanu, etc.,
8		935	215.74	22	
9		933	135.18	22	
10		927	291.04	26.85	
11		928	134.966	26.85	
12		895	259.31	69.455	
13		897	264.14	69.455	
14		898	404.33	69.455	
15		911	183.33	69.455	
16		912	79.31	69.455	
17		913	228.34	69.455	
18		915	177.66	69.455	
19		925	527.87	69.455	
20		900	174.39	151.145	
21		901	251.00	151.145	
		TOTAL:	6570.054	1388.318	

The selected areas consists of hillocks, with steep to gentle slopes, some are degraded plain areas with accessibility to roads and are degraded mainly due to biotic interference and are found suitable for Compensatory Afforestation. Most of these areas were retrieved from illegal encroachers and if not immediately brought under afforestation, there is possibility of encroachment.

SOIL DESCRIPTION AND TERRAIN:

In the proposed area, the soils are eroded and are ranging from Black Soil, Sandy loam with some hillocks here and there. There are several streams and streamlets running downwards from the hillocks causing soil erosion.

FLORA AND FAUNA:

In the proposed degraded Forest area the species available are mainly degraded coppice growth of Billudu, Nalla Maddi, Vepa, Tuniki, Chennangi, Kodisa, Tirumanu, etc. The Wild animals found in the selected area are Wild boar, Wild Cat, Hare etc. This area has reported the movement of (Bison), Spotted Deer, Chousingha. Thus steps such as restoration of the vegetation, provision of sufficient water sources to the wild animals, provision of fodder and legume and overall protection is proposed..

TREATMENT MODELS:

It is proposed to treat the Degraded Forest areas under the following Treatment models. It is proposed to treat the Degraded Forest areas under the following Treatment models.

a) Model-I : Protection of Reserve Forests by Permanent Boundary Demarcation and Protection from Fire.

b) Model-II: Artificial Regeneration

(i) Raising of plantations in degraded forest areas

Out of 1388.318 Ha identified degraded area, an area of 42.00 Ha is proposed to take up Percolation tanks/ Mini Percolation Tanks and development of Nursery etc., and the balance area of 1346.318 Ha was proposed for taking up afforestation works.

The above Afforestation and Reforestation works shall be carried out either by involvement of VSS members or through Departmental execution.

I. Model I: Demarcation of Permanent Forest Boundaries in the form of Cattle Proof

Trench (CPT) and Improvement of Soil Moisture by way of SMC works:

- a) Most of these areas identified for Compensatory Afforestation area are having good viable root stock. Offering absolute protection to these degraded areas from Biotic pressure is the best course of action for developing the area into productive forests. Continuous peripheral Trench all along the boundary of the Compensatory Afforestation area is proposed to be taken up with a twin objective of moisture conservation and boundary demarcation. Wherever it is not possible to dig a trench due to striking of hard stratum of rock, it is proposed to take up stone wall with rubble masonry or Erection of chain link fence as per filed conditions and local availability of materials.
- b) Fire management will also form an important part of the forest management and stand improvement strategy. Protection of these areas from fire, grazing and illicit felling is absolutely essential to improve the stand and it is proposed to be ensured either through Vana Samrakshana Samithies (VSS) or Departmental execution. Therefore, 5mtr wide fire lines are proposed in the above identified area.
- c) Digging of Percolation Tanks or Mini percolation tanks wherever required in the identified degraded forest area where the existing 2nd order nallahs are there.

II. Model II; Artificial Regeneration

RAISING OF PLANTATIONS – PLANTING ON PLAINS/DEGRADED FOREST AREAS

To compensate the loss of Valuable forest growth in the Diverted Reserved forest areas, it is proposed to raise certain plantations in the degraded forest areas.

a. RAISING OF BAMBOO PLANTATIONS :

It is proposed to raise the above model of plantations under **Semi Mechanical Method (SMM)** through intensive site preparation practices. The operations to be carried out are Survey and demarcation, Clearing the miscellaneous jungle growth, uprooting the stumps, Tilling the area, collection and removal of uprooted stumps through tractor/ manually, Deep ploughing the area with heavy duty tractors and planting at 5 X 5 m espacement in 45 centimeter cube pits. All other cultural operations like Weedings, Soil workings, manuring etc., will be provided for Seven years excluding raising year duly following the instructions in PCCF A.P Circular No6/2002/PMU-I/3, issued vide Prl. Chief Conservator of Forests, A.P., Hyderabad Rc.No.17309/2000/PMU-I/3, Dt.27.09.2002 and instructions issued by Prl. CCF, A.P., Hyderabad Rc.No.4775/2002/F5, dt.21.02.2005.

a. NON TEAK SECONDARY HARDWOOD SPECIES (NTSH) PLANTATIONS:

It is proposed to raise the above model of plantation under **Semi Mechanical Method (SMM)** through intensive site preparation practices. The operations to be carried out are Survey and demarcation, clearing the miscellaneous jungle growth, Digging of Staggered contour Trenches and planting at 3 X 3 m espacement in 45 centimeter cube pits. All other cultural operations like Weeding's, Soil workings, manuring etc., will be provided for Seven years excluding raising year duly following the PCCF instructions.

III. Soil and Moisture Conservation Plan:

- (i) The area is undulating and hence proposed taking up of Contour Trenches of 45 Cms. wide, 5 Mts. Long and 30 Cms. Depth @ 100 Cmt. / Ha. in 400 Ha. = 40000 Cmt. @ Rs.42.40 per Cmt.
- (ii) Construction of percolation tanks depending upon the terrain at an average of one for every 50.00 Ha. for 500.00 Ha = 10 Nos. @ 3.00 Lakhs each.
- (iii) Construction of Check Dams @ 1 Per 100 Ha. = 5 Nos. @ 5.00 Lakh
- (iv) Provision for solar bore wells with pump facility and over head tank for providing water to the wild animals.
 - (a) Solar Motor and Bore well – 5 Nos. @ 6.00 Lakhs each.
 - (b) Over head tanks – 5 Nos. @ 5.00 Lakhs each.

IV. Wildlife Mitigation measures:

- (1) Provision of Fodder Plots @ 1.00 Ha each – 400 Nos. @ Rs.50,000/- per No. including maintenance for (2) years.
- (2) Provision of planting legumes in the fringes of fodder plots 400 Nos. @ Rs.25,000/- per No. including cost of maintenance for (2) years
- (3) Planting of wild fruits @ 50,000 Nos. @ 10,000 per plants including cost of raising, planting and maintenance for (2) years.

V. Fire Mitigation measures:

- (1) Procurement of fire blowers for controlling fire in the proposed area @ Rs.60,000/- each
- (2) Procurement of fire fighting equipment @ Rs.10,000/- each
- (3) Construction of watch tower @ Rs.10.00 Lakhs
- (4) Engaging fire watchers @ Rs.5000/- per month.

VI. Rehabilitation and density improvement in degraded area:

In Koyagudem area there are 3 opencast mines are working. The nearest major town is Paloncha and Kothagudem through these coal is being transported. Moreover, after diversion of RF area the available fauna in all probability will move to adjoining forest areas. There is need to improve the density and provide suitable protection in the adjoining areas. The ambient air quality in adjoining areas need to be kept in good condition.

It is proposed to take up the density improvement and rehabilitation works in Chatakonda Reserve Forest of Kothaggudem Range. This reserve Forest is located right opposite to the Collectorate, Kothagudem (Under Construction). The year wise action plan is as follows.

SI No	Year	Work proposed	Cost in lakhs
1	2019-20	Interpretation Centre development	25.00
2	2019-20	Fencing with See through wall (6.00 Kms) @ 80.00 Lakhs/Km	480.00
3	2020-21	Taking up plantation of tall plants, grasses, in 300Ha, Percolation tanks and maintenance	400.00
4		Provision of Walk ways, Open air Yoga Shed and Gymnasium.	25.00
5	2021-22	Provision of Butterfly and Snake park	50.00
6	2020-25	Maintenance	50.00
		Total	1030.00

towards over heads. The proposals under over heads are for hiring of Jeeps, engaging of Technical Assistant, automation of office of Forest Range Officers, Erection of watch tower, Barrier gate, Erection of Base camp, Utility payments of Division Office and Range Offices, Stationary and Computer peripherals, Maintenance and repairs, POL charges of Division Office etc.

IX. PROJECT COST:

A. Compensatory Afforestation Scheme:

The annual requirement of funds have been worked out on the base cost of 2018-19 FSR with 10% annual escalation for the remaining project period up to 2029-30. The component wise details in brief are as follows.

S.No	Scheme Proposals	Cost in Lakhs
1	Forest Protection including Fire protection & SMC works.	202.035
2	Compensatory Afforestation in Degraded Forest Area	5687.784
3	Soil and Moisture Conservation Plan	126.960
4	Wildlife mitigation and man animal conflict reduction measures - Bio-Diversity restoration	304.500
5	Rehabilitation and density improvement in degraded area	1030.00
6	Nursery infrastructure	37.95
7	Awareness Programmes	17.107
8	Monitoring of Wildlife Improvement	25.00
9	Administrative Cost	369.461
	Total:	7800.797

B. Conservation of wild life sensitive Areas:-

As this project is near to wild life sanctuary and one such big patch of Forests in Kanakagiri hills (spread over to about 22,000 Ha) is proposed to be treated and conserved. Suitable water conservation, Fire Control and Silvicultural operations will be taken up. This area may serve as corridor for important species. This conservation is proposed at a financial cost of Rs. **10.00 crores**

X. Total Project Cost:

Sl.No	Scheme Proposals	Cost in Lakhs
A)	Compensatory Afforestation Scheme	
1	Forest Protection including Fire protection & SMC works.	202.035
2	Compensatory Afforestation in Degraded Forest Area	5687.784
3	Soil and Moisture Conservation Plan	126.960
4	Wildlife mitigation and man animal conflict reduction measures - Bio-Diversity restoration	304.500
5	Rehabilitation and density Improvement in degraded area in chathakonda RF	1030.000
6	Nursery infrastructure	37.95
7	Awareness Programmes	17.107
8	Monitoring of Wild Life Improvement	25.000
9	Administrative Cost	369.461
	Total:	7800.797
B)	Conservation of wild life sensitive Areas	1000.000
	Total ::	8800.797


XI. MODE OF EXECUTION:


It is proposed to implement the above proposals through VSS on Joint Forest Management concept or by Departmental execution method wherever possible. In addition to the existing staff of Forest Department with required logistic support, necessary manpower required for effective implementation of the project will be hired through outsourcing.

Digging of Peripheral trench work, SMC works and other Afforestation works are being carried out in the above said proposed degraded forest area through ongoing Schemes, like TKHH. Hence, left over works if any as per this scheme will be carried out in the adjoining Forest Blocks of Gangaram Range.

Annexures:

Annexure	I	Abstract of Compensatory Afforestation Scheme in Degraded Forest Area.
Annexure	II	Year wise Estimated cost Compensatory Afforestation in Degraded Forest Area.
Annexure	III	Unit cost Data sheets


Forest Range Officer,
Gangaram


District Forest Officer,
Mahabubabad