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**COMPENSATORY AFFORESTATION SCHEME FOR RAISING OF PLANTATIONS  
OVER 145.18 Ha (358.73 Acres) IN NON-FOREST AREAS IN AMANGAL DIVISION  
OF RANGA REDDY DISTRICT  
(IN LIEU OF DIVERSION OF FOREST LAND TO TELANGANA DRINKING WATER  
SUPPLY PROJECT – RWS & S DEPARTMENT, GOVERNMENT OF TELANGANA  
IN FAVOUR OF SUPERINTENDING ENGINEER, RWS &S, TDWSP CIRCLE,  
MAHABUBNAGAR.**

**1. INTRODUCTION:**

The Telangana Panchayath Raj & Rural Water Supply and Sanitation Department vide Lr.No.AEE/RWS/Telangana water grid/ Forest Permission/2014-15, dated 27.01.2015 has identified and allotted an area of **145.18 Ha (358.73 Acres)** of **Non-Forest** land in Sy. No. 100 of Nagilla Village at Madgul Mandal in Amangal Range *in lieu* of Diversion of Reserve Forest area for Laying of pipeline and Construction of other Structures for providing safe Drinking Water in Ranga Reddy District in favour of Superintending Engineer, RWS&S, TDWSP Circle, Mahabubnagar.

The Compensatory Afforestation Scheme for the said non-forest land over an area of 145.18 Ha (358.73 Acres) in Sy. No. 100 of Nagilla Village at Madgul Mandal in Amangal Range is submitted as follows :

**2. OBJECTIVES:**

- a) The main objective of the proposed project is to compensate the loss of tree growth in the reserved forest land being diverted for drinking water pipeline by raising of plantation and implement of vegetation in equivalent non-forest land.
- b) To increase the forest area in Amangal forest division,
- c) To check the degradation of the land,
- d) To conserve Soil and Moisture in the degraded land,
- e) To re-cloth the degraded non-forest land with green covers, etc.

**3. LOCATION OF THE PROJECT:**

Sl. No.	Mandal	Village	Sy. No.	Area
1	Madgul	Nagilla	100	358.73 Acres (145.18 Ha.)

Location sketch of the areas proposed is enclosed.

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#### 4. **IMPLEMENTING AGENCY:**

The proposed C.A. Scheme will be implemented in the **Nagilla Village** by the Telangana Forest Department.

#### 5. **SUITABILITY OF THE AREA:**

The terrain is hilly and slopping. The entire CA land is hillock with a small extent of plateau. The soil erosion is high due to slopping terrain and top soil is eroded. The soil depth is very less and most of it is with boulders with stones. Based on suitability, the site specific treatments are proposed

6. **FORMATION OF JEEPABLE TRACK FOR TRANSPORT OF PLANTS AND SOIL :** Since the CA land is hillock with plateau at the top, it is proposed for formation of jeepable track for transport of plants, soil, ease for inspection, etc.,

7. **TREATMENT TECHNIQUES :** The maintenance of plantation is proposed for (10) years.

- a) **SEMI-MECHANICAL METHOD** : It is proposed raise plantation over an area of 20 Ha under SMM. The operations include clearance of bushes, uprootal stumps, deep ploughing and tilling of soil, planting and protection.
- b) **LABOUR INTENSIVE METHOD** : It is proposed raise plantation over an area of 15Ha under LIM in plain patches. The operations include clearance of bushes, pitting, adding imported soil to pits, planting and protection.
- c) **BARRHEN HILL AFFORESTATION** : It is proposed raise plantation over an area of 60Ha under BHA in sloping areas. The operations include clearance of bushes, pitting along the contour, adding imported soil to pits, planting and protection.
- d) **AIDED NATURAL RE-GENERATION** : The balance area of 46 Ha. is proposed for treatment under ANR. The activities proposed on clearance of bushes / rank growth around promising seedlings, soil working, dibbling and sowing of treated seeds in blank areas etc.,

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8. **CHOICE OF SPECIES :** It is proposed to plant on the native species to the said area including fruit bearing species as follows :

Sl. No.	Local Name	Name of Species
1.	Vepa	<i>Azadirachta Indica</i>
2.	Sithaphal	<i>Annoa Squamosa</i>
3.	Narlinga	<i>Albizia amara</i>
4.	Thella chinduga	<i>Albizia procra</i>
5.	Rela	<i>Cassia fistula</i>
6.	Moduga	<i>Butea monosperma</i>
7.	Raavi	<i>Ficus religiosa</i>
8.	Juvvi	<i>Ficus racemosa</i>
9.	Marri	<i>Ficus benghalensis</i>
10.	Morri	<i>Buchanania lanzan</i>
11.	Usiri	<i>Emblica officinalis</i>
12.	Regu	<i>Zizyphus mauritiana</i>
13.	Gutti	<i>Polyalthia cerasoides</i>
14.	Neeruddi	<i>Dolichandrone Crispa</i>
15.	Gumpena	<i>Lannea coromandelica</i>
16.	Velaga	<i>Limonia elephantum</i>
17.	Thuniki	<i>Diospyros dubia</i>

9. **ESPACEMENT:**

Espacement proposed is 3 x 3 Mtrs i.e. 1111 plants per Ha. On the well grown plants of 2 mts height is proposed for planting.

10. **NURSERY INFRASTRUCTURE :** For raising good planting stock, Central Nursery is proposed with all the infrastructure.

11. **SOIL AND MOISTURE CONSERVATION MEASURES :** Since the land is hilly and slope, it is proposed to control erosion by intensive soil and moisture conservation measures. The SMC measures proposed on staggered contour trenches, Continuous Contour Trenches, Rockfill dams, Mini Percolation tanks, Check dams, Major percolation tanks etc.,

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**12. PERIPHERAL TRENCH :** It is proposed to protect the entire CA area from biotic interference by digging peripheral trench of size 2 mts x 1.5 mts x 2.0 mts all around the periphery of CA area. In places with rocky patches, chainlink fence will be done, if it is not possible for trench. It is proposed consolidate the mould of peripheral trench by digging of planting on the mound and broadcasting of treated babul seed inside the trench.

**13. FIRE PREVENTION :** It is proposed to prevent and control fire in CA area by formation and maintenance of firelines, fire watch tower, engaging fire watchers during fire season for (5) months and fire control equipments.

**14. SAUCER PITS :** It is also proposed for formation of saucer pits @ 01 No. / 10 Ha. and maintain water supply during summer for the wildlife.

**15. PROJECT PERIOD:**

The proposed C.A. Project will be implemented over a period from **2017-18 to 2029-30** i.e. with (10) years maintenance of plantation starting.

**16. PROJECT COST:**

The estimated cost of the proposed **CA Scheme is Rs. 1308.02 lakhs.**  
**i.e. Rs. 9.00 Lakhs per Ha.**

The component wise and year wise requirement is shown in Annexure enclosed.

  
**District Forest Officer,  
Rangareddy.**

  
**Forest Divisional Officer,  
Amangal Division.**



**YEAR-WISE ACTION PLAN**  
**COMPENSATORY AFFORESTATION SCHEME FOR RAISING OF 145.18 Ha (358.73 Acres) PLANTATIONS IN NON-FOREST AREA IN AMANGAL DIVISION OF RANGA REDDY DISTRICT**  
**(IN LIEU OF DIVERSION OF FOREST LAND TO TELANGANA DRINKING WATER SUPPLY PROJECT – RWS & S DEPARTMENT, GOVERNMENT OF TELANGANA**  
**IN FAVOUR OF SUPERINTENDING ENGINEER, RWS & S, TDWSP CIRCLE, MAHABUBNAGAR.**

(Values in Col. No. 7 to 20 are Rs. In Lakhs)

Sl No	Component	Unit	Phy	Unit cost (Rs. In Lakhs) as per FSR 2016-17	Fin. (Rs. In Lakhs) as per FSR 2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	Total	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	<b>CONSOLIDATION OF RF BOUNDARY</b>																		19.59	
a	Digging of Peripheral Trench 2 x 2 x 1.5 mts	KMs	12	1.484	17.81	19.59														
b	Chainlink fence	KMs	3	45.00															84.60	
(i)	Cost of Chainlink fence	KMs	3	28.20	84.60	84.60													56.40	
(ii)	Labour cost for erection of chainlink fence	KMs	3	18.80	56.40	30.00	26.40												4.22	
c	Bund stabilization	KMs	12	0.32	3.84		4.22												50.82	
d	Construction of Boundary Pillars	Nos	220	0.10	22.00	24.20	26.62													
2	<b>RAISING NURSERY</b>																		22.40	
a	Raising & Conversion	Nos. / Lakh	2.00	10.18	20.36	22.40	0.00												10.96	
b	Maintenance	Nos. / Lakh	2	4.98	9.96	0.00	10.96												38.50	
c	Establishment of Central Nursery for Raising good quality plants	Nos	1	35.00	35.00	38.50	0.00												15.00	
d	Maintenance of Central Nursery	Nos	5	3.00	15.00	3.00	3.00	3.00	3.00	3.00										
3	<b>PLANTATIONS</b>																		8.99	
a	<b>Advance works</b>																		5.29	
(i)	SMM	Ha.	24.18	0.310	7.50		8.99												20.02	
(ii)	LI	Ha.	15	0.294	4.41		5.29													
(iii)	BHA	Ha.	60	0.278	16.68		20.02												39.54	
(iv)	Transportation of soil for Plantation for LI & BHA (75 Ha) of pit size 0.45x0.45x0.45 = 0.09 Cu.mts @ 1111 per ha. upto lead 25 KMs.	Cum	7600	0.00473	35.95	39.54														
b	<b>Raising works</b>																		6.55	
(i)	SMM	Ha.	24.18	0.492	11.90			6.55											6.49	
(ii)	LIM	Ha.	15	0.325	4.88			6.49											21.43	
(iii)	BHA	Ha.	60	0.322	19.32			21.43												
c	<b>1st Year Maintenance</b>																		8.97	
(i)	SMM	Ha.	24.18	0.265	6.41				8.97										5.40	
(ii)	LIM	Ha.	15	0.257	3.86				5.40										22.34	
(iii)	BHA	Ha.	60	0.266	15.96				22.34											
d	<b>2nd Year Maintenance</b>																		5.88	
(i)	SMM	Ha.	24.18	0.162	3.92					5.88									4.34	
(ii)	LIM	Ha.	15	0.193	2.90					4.34									17.64	
(iii)	BHA	Ha.	60	0.196	11.76					17.64										
e	<b>3rd Year Maintenance</b>																		6.27	
(i)	SMM	Ha.	24.18	0.162	3.92						6.27								4.63	
(ii)	LIM	Ha.	15	0.193	2.90						4.63								17.86	
(iii)	BHA	Ha.	60	0.186	11.16						17.86									
f	<b>4th Year Maintenance</b>																		6.66	
(i)	SMM	Ha.	24.18	0.162	3.92							6.66							4.92	
(ii)	LIM	Ha.	15	0.193	2.90							4.92							18.97	
(iii)	BHA	Ha.	60	0.186	11.16							18.97								
g	<b>5th Year Maintenance</b>																		7.05	
(i)	SMM	Ha.	24.18	0.162	3.92								7.05						5.21	
(ii)	LIM	Ha.	15	0.193	2.90								5.21						20.09	
(iii)	BHA	Ha.	60	0.186	11.16								20.09							
h	<b>6th Year Maintenance</b>																		4.64	
(i)	SMM	Ha.	24.18	0.101	2.44									4.64					3.11	
(ii)	LIM	Ha.	15	0.109	1.64									3.11					11.51	
(iii)	BHA	Ha.	60	0.101	6.06									11.51						



Sl No	Component	Unit	Phy	Unit cost (Rs. In Lakhs) as per FSR 2016-17	Fin. (Rs. In Lakhs) as per FSR 2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	Total	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
i	7th Year Maintenance																			
(i)	SMM	Ha.	24.18	0.101	2.44															
(ii)	LIM	Ha.	15	0.109	1.64										4.22				4.22	
(iii)	BHA	Ha.	60	0.101	6.06										3.42				3.42	
j	8th Year Maintenance														12.66				12.66	
(i)	SMM	Ha.	24.18	0.101	2.44															
(ii)	LIM	Ha.	15	0.109	1.64											4.64			4.64	
(iii)	BHA	Ha.	60	0.101	6.06											3.76			3.76	
k	9th Year Maintenance															13.93			13.93	
(i)	SMM	Ha.	24.18	0.101	2.44															
(ii)	LIM	Ha.	15	0.109	1.64															
(iii)	BHA	Ha.	60	0.101	6.06												5.11		5.11	
l	10th Year Maintenance																4.14		4.14	
(i)	SMM	Ha.	24.18	0.101	2.44												15.32		15.32	
(ii)	LIM	Ha.	15	0.109	1.64															
(iii)	BHA	Ha.	60	0.101	6.06													5.62	5.62	
4	ANR TREATMENT (Incl. clearnace rank growth, singling, seed dibbling in 1x1 bed etc..)	Ha.	46	0.07	3.08	3.39	3.73	4.10	4.51	4.96	5.46	6.01	6.61	7.27	7.99	8.79	9.67	10.64	83.14	
5	INTENSIFICATION OF FOREST FIRE MANAGEMENT																			
a	Fire line (5Mt.) Creation	Kms	30	0.07	2.04	2.24														
b	Fire line (5Mt.) Maintenance	Kms	30	0.05	1.52	1.67	1.83	2.02	2.22	2.44	2.68	2.95	3.25	3.57	3.93	4.32	4.76	5.23	2.24	
c	Fire Fighting Equipments	Ls	Ls	5.00	5.00	5.50				8.05					11.79				40.88	
d	Construction of Fire Watch Tower	Nos	1	12.00	12.00		14.52											17.26	42.60	
6	SMC WORKS																		14.52	
a	SCT / CCT / MPT/ RFDs / Contour Wall @ 0.15 lakh / Ha	Ha.	141	0.15	23.27	10.00	13.27													
b	Construction of Check Dams	Nos	2	5.00	10.00	5.00	5.00												23.27	
c	Construction of Major Percolation Tanks	Nos	10	2.00	20.00	8.00	8.00	4.00											10.00	
7	CONSTRUCTION OF SAUCER PITS AND MAINTENANCE	Nos	10	0.30	3.00	1.50	1.50												20.00	
8	FOREST PROTECTION																		3.00	
a	Protection Watcher for 10 yrs	Nos	6	0.08	54.00	5.40	5.94	6.53	7.19	7.91	8.70	9.57	10.52	11.58	12.73	14.01	15.41	16.95	132.42	
b	Hiring of Vehicle	Nos	1	3.00	30.00	3.00	3.30	3.63	3.99	4.39	4.83	5.31	5.85	6.43	7.07	7.78	8.56	9.42	73.57	
9	PUBLICITY & AWARENESS	Ls	Ls	LS	15.00	0.00	3.00	0.00	3.00	0.00	3.00	0.00	3.00	0.00	3.00	0.00	0.00	0.00	15.00	
						307.53	165.60	57.75	60.62	58.61	53.43	54.39	61.57	59.90	55.04	57.24	62.96	86.52	1141.16	
10	Communication & Survey facilities	LS	LS	LS	10.00	5.00	2.00		2.00		1.00								10.00	
11	Formation approach Roads	Cum	12000	0.0015517	18.62	20.48														
	TOTAL COST OF WORKS					333.01	167.60	57.75	62.62	58.61	54.43	54.39	61.57	59.90	55.04	57.24	62.96	86.52	1171.65	
12	Admin Cost for @ 10% on plantation & SMC works (purchase of Computers, stationery and Renumeration of DEOs, & Technical Assistants and other contingencies) (Excluding the cost of materials such as Nursery infrastructure, Fire equipment etc..)					23.01	18.68	6.55	7.08	5.74	6.16	6.16	6.97	5.47	6.23	6.48	7.13	7.88	113.65	
13	Maintenance and Evalution Cost @ 2%					6.15	3.31	1.15	1.21	1.17	1.07	1.09	1.23	1.20	1.10	1.14	1.26	1.73	22.82	
	GRAND TOTAL:					362.18	189.59	65.46	70.92	65.53	61.66	61.64	69.78	66.57	62.37	64.86	71.35	96.13	1308.02	

NOTE : It is submitted that the Unit cost mentioned at column No. 5 is as per FSR 2016-17.

2) The rates from 2017-18 to 2029-30 are increase by 10% each year over and above FSR 2016-17.

Forest Divisional Officer,  
Amangal.

District Forest Officer,  
Rangareddy.