

## **Annexure-19**

### **MODEL No-3 Annexure-4(1)**

#### **Compensatory Afforestation Scheme for Double Degraded Forest area**

Diversion of 122.4077 ha. of Protected Forest land for laying 2/4 lanning of Bhuj- Khavda-Dharmashala section of NH-341 Package-II CH 65-478 to Km. 162+185 in the State of Gujarat (National Highway Division, Gandhidham-Kutch)

(Proposed Diversion Area 122.4077 ha.)

Detailed scheme of Compensatory Afforestation for degraded area 245.00 ha. to be carried out in lieu of 122.4077 ha. of forest land to be diverted in Kutch district.

#### **1. Details of degraded land.**

Village	Bhuj
Taluka	Bhuj
Range	Bhuj ( West )
District	Kutch
Division	Kutch ( West )
Block/ Patal, Compartment No.	S.No.870/pt.
Area to be afforested	245.00 ha.
Working circle	

#### **2. Description of Area.**

Soil type	Black cotton with Murom
Topography	Plain
Slope	Medium & Gentle
Whether the area is bearing any root stock of Vegetation	Yes

#### **3. Name of Plantation Programme:-**

Compensatory Afforestation Scheme for Degraded Area.

#### **4. Schedule of Plantation Programme: -**

(i)	The Compensatory Afforestation on degraded area would be started by Dy. Conservator of Forest Kutch West Division as early as possible after the proposal is formally approved.
(ii)	Compensatory Afforestation will be done in 245.00 ha. area. The total afforestation cost will be about <b>Rs.10,53,81,443/-</b> 'National Highway Division, Gandhidham-Kutch has given an undertaking to pay the cost of Compensatory Afforestation as per the prevailing wages (including the price escalation and supervision charges).

## 5. Technical Details :-

Technical details of Compensatory Afforestation are as Follows :-

Sr. No.	Details	Specifications															
a	General Details	The C.A. will be taken under Compensatory Afforestation for double land on degraded Forest Areas. The prevailing wage rate is 310.40 per day.															
b	Spacement	3 X 3 mtr., 1111 plants per ha.															
c	Species to be planted (No. of plants per ha.)	<table> <tr> <td>Gundi</td><td>211</td><td rowspan="7">Minimum planting height will be 30 cm. at the time of planting. However it will vary for different species.</td></tr> <tr> <td>Gugal</td><td>250</td></tr> <tr> <td>Pilu</td><td>225</td></tr> <tr> <td>Khijado</td><td>150</td></tr> <tr> <td>Desi baval</td><td>225</td></tr> <tr> <td>Chhini Lai (Tamarix aphylla)</td><td>50</td></tr> <tr> <td><b>Total</b></td><td><b>1111</b></td></tr> </table>	Gundi	211	Minimum planting height will be 30 cm. at the time of planting. However it will vary for different species.	Gugal	250	Pilu	225	Khijado	150	Desi baval	225	Chhini Lai (Tamarix aphylla)	50	<b>Total</b>	<b>1111</b>
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Gugal	250																
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Desi baval	225																
Chhini Lai (Tamarix aphylla)	50																
<b>Total</b>	<b>1111</b>																
d	Nursery Technique	Nine months old polypot raised plants will be planted at the onset of monsoon.															
e	Site Preparation	The malformed rootstock present in the area will be cutback & the site will be cleaned in the month of Nov-Dec. Alignment & pit digging 45 x 45 x 45 cms. will be carried out in the month of Dec-Jan.															
f	Plantation Method	Polypot raised plants will be planted during monsoon.															
g	Soil & Moisture Conservation Works	(i) Pucca structure like Check dam, check wall, retaining wall (ii) Contour trenches 2.00 x 0.45 x 0.30, 300 Nos/ha. will be dug along the contour line. the dug out soil will be heaped on the down ward side. Gully plugging & Nala Banding using The loose stone available in the area will be carried out as per requirement. Seeds of Pillu, Desi baval ...etc. will be planted during monsoon in the upper side of nala as per suitability.															
h	Protection Trench	Protection trench, Seed sowing And planting of cuttings of Ipomea/ Glarcidia along the trench.															
i	Silvicultural Operations	1 <sup>st</sup> year three weeding soil working, Support watering will be provided if needed. 2 <sup>nd</sup> year two weeding soil working. 3 <sup>rd</sup> year one weeding soil working.															

j	Maintenance	It is proposed to maintain the Plantation up to ten years.
k	Subsequent silvicultural Operation	Cleaning, cutbacks, thinning etc. (as per species specific requirement) will be carried out at the age as per prescribed in the working plan.
l	Proposed monitoring mechanism	<p>(i) A plantation register is to be maintained.</p> <p>(ii) Monitoring is to be done as per the following norms.</p> <p>Forester – 100%</p> <p>RFO – 100%</p> <p>ACF – 20%</p> <p>DCF – 10%</p> <p>(iii) The results of survival etc. are maintained in the plantation register on a periodical basis, which is updated at the end of November and March each year.</p> <p>(iv) The collar girth is also to be reordered at the end of each year.</p> <p>(v) At the end of maintenance period, the area is aimed at full stocking and pole crop girth for all the species, except bamboo.</p> <p>(vi) Bamboo would be of the harvestable size by the end of 4<sup>th</sup> year.</p> <p>(vii) Third party monitoring mechanism is also in the State and if the plantation is in the sample selected, it will also be monitored by the third party selected for this purpose.</p>
m	Regeneration cleaning	Cut-back and promotion of root suckers.
n	Silviculture & other activities	Only afforestation aimed plantation will be taken up, as the area falls under degraded forest land.



(B. J. Asari)  
Dy Conservator of Forest  
Kutch West Division, Bhuj

The Compensatory Afforestation scheme at the cost of **Rs.10,53,81,443/-** is technically and administrative approved by the undersigned.



**Chief Conservator of Forest  
Kachchh Circle, Bhuj.**

As per APCCF, Land, Gandhinagar letter dated: 18/11/2019 & 27/11/2019

Diversion of 122.4077 ha. of Protected Forest land for laying 2/4 lanning of Bhuj- Khavda-Dharmashala section of NH-341 Package-II CH 65-478 to Km. 162+185 in the State of Gujarat (National Highway Division, Gandhidham-Kutch) (Proposed Diversion Area 122.4077 ha.)																	
Increased by 10% / year with 20 % add Supervision charge of Rate Structure for Compensatory Afforestation for the Year 2019-20																	
Daily Wage : Rs.			310.40														
Sr. No.	MODEL No.		Rate/ha.	0 Year	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Total	20% Add	Grand Total
1	2	3	4	5	6	7	8	9	10	11	12	12	14	15	16	17	18
1	MODEL No-3	A	Normal Rate	107175.58	64003.39	41081.78	29859.38	9686.61	4865.20	4865.20	4865.20	4865.20	4865.20	4865.20	280997.94	56199.59	337197.53
2	Annexure-4(1)	B	Increased by 10% / year	117893.14	76804.07	53406.31	41803.13	14529.92	7784.32	8270.84	8757.36	9243.88	9730.40	10216.92	358440.29	71688.06	430128.34

Date :- 06/02/2020  
Place:- Bhuj - Kutch

  
(B.J. Asari)

Dy. Conservator of Forest  
Kutch West Division, Bhuj



MODEL No-3 Annexure-4(1)

**Diversion of 122.4077 ha. of Protected Forest land for laying 2/4 lanning of Bhuj- Khavda-Dharmashala section of NH-341 Package-II CH 65-478 to Km. 162+185 in the State of Gujarat (National Highway Division, Gandhidham-Kutch)**  
(Proposed Diversion Area 122.4077 ha.)

Daily wages Rs. 310.40

Spacemnts = 3 m x 3 m				
1111 seedling / Ha				
1st year replacement 10 % = 111 seedling /ha				
2nd year replacement 20 % = 111+111 seedling /ha				
3rd year replacement 10 % = 111 seedling /ha				
Total Seedlings = 1333 seedling /ha				
Polypot size : 15 cm x 25 cm x 200				
Item of work	Qty.	Labour	Material	Total
1	2	3	4	5
<b>0 year</b>				
Nursery				
(a) Cost of soil, ,manure, seeds, water, fertillizer, insecticides, implements, rent of lands. Shade, etc. (including 10 % for casualty replacement)	1222	0.00	1663.90	1663.90
(b) labour : Preparation of beds, filling and arranging of bags,showing of seeds, watering shifting, weeding etc.	1222	4070.55	210.82	4281.37
(c ) Seedling cost for casualty replacement in one year old (20%)	222	1286.04	384.35	1670.39
(d) Seedling cost for casualty replacement in two year old (10%)	111	643.83	191.36	835.19
<b>Total</b>		<b>6000.42</b>	<b>2450.43</b>	<b>8450.85</b>
<b>2. Area Development ( Land Preparation )</b>				
(a) Survey, cutback and promotion of root suckers		3058.59	0.00	3058.59
(b) Aligment and digging of pits 0.45 X 0.45 X 0.45	1111@ 6.00	8831.97	0.00	8831.97
<b>Total</b>		<b>11890.56</b>	<b>0.00</b>	<b>11890.56</b>
(a) Natural fertilizer (Neem cake/ Castor cake)	1111 @ 5.00	0.00	9008.74	9008.74
<b>Total</b>		<b>0.00</b>	<b>9008.74</b>	<b>9008.74</b>
<b>3. SMC Works</b>				
(a) Check wall/ retaining wall /checkdem (all pucca only)	L.S.	10865.62	21569.07	32434.69
(b) Contour trench 2 M x 45 Cm x 30 Cm as per Rs.17.00/rmt (300 trench)	600 rmt.	8270.85	0.00	8270.85
<b>Total</b>		<b>19136.47</b>	<b>21569.07</b>	<b>40705.54</b>
<b>4. Protection</b>				
(a) Barbed wire fencing	L.S.	3243.47	32434.70	35678.17
(b) Seed sowing and planting of cuttings of Ipomea/ Glaricidia along the fence		1008.72	433.00	1441.72
<b>Total</b>		<b>4252.19</b>	<b>32867.70</b>	<b>37119.89</b>
<b>Sub Total of 0 year</b>		<b>41279.64</b>	<b>65895.94</b>	<b>107175.58</b>
<b>1st Year</b>				
(a) Maintenance of nursery (April to June)	1222	2862.36	285.43	3147.79
(b) Transport of seedling for plantation	1111	1569.84	324.35	1894.19
(c) Planting with khamna of Min 1 m dia	1111	4826.29	0.00	4826.29
(d)Transport of seediling for casualty replacement	111	167.04	37.30	204.34
(e) 3 weeding cum soil working	1111	18812.12	0.00	18812.12

(f) Support watering 5 times @ 3.25		12025.16	17255.26	29280.42
(g) Protection / tending operation		3892.16	0.00	3892.16
(h) Tending to natural vegetation		973.04	0.00	973.04
(i) Contingency		0.00	973.04	973.04
<b>Total for 1st year</b>		<b>45128.01</b>	<b>18875.38</b>	<b>64003.39</b>
<b>2nd Year</b>				
(a) 2 weeding & soil working		9644.46	0.00	9644.46
(b) 20 % Casually replcement, transport and planting	111+111	162.17	807.62	969.79
(c) Natural fertilizer (neem cake / caster cake ) etc.	Rs.5/ plant	0.00	9008.74	9008.74
(d ) Support watering 3 times @ 3.25		7213.48	10353.15	17566.63
(e) Protection / tending operation		3892.16	0.00	3892.16
<b>Total for 2nd year</b>		<b>20912.27</b>	<b>20169.51</b>	<b>41081.78</b>
<b>3rd Year</b>				
(a) 2 weeding & soil working		9644.46	0.00	9644.46
(b) 10 % Casually replcement, transport and planting	111	81.09	403.81	484.90
(c) Natural fertilizer, neem cake etc.	Rs.5/ plant	0.00	9008.74	9008.74
(d ) Support watering 1 times @ 3.25		2405.03	3451.05	5856.08
(e) Protection & maintenance of fencing / tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 3rd year</b>		<b>16995.78</b>	<b>12863.60</b>	<b>29859.38</b>
<b>4thYear</b>				
(a) 1 weeding & soil working		4821.41	0.00	4821.41
(b) Protection & Maintenance of fencing/ Tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 4th year</b>		<b>9686.61</b>	<b>0.00</b>	<b>9686.61</b>
<b>5thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 5th year</b>		<b>4865.20</b>	<b>0.00</b>	<b>4865.20</b>
<b>6thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 6th year</b>		<b>4865.20</b>	<b>0.00</b>	<b>4865.20</b>
<b>7thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 7th year</b>		<b>4865.20</b>	<b>0.00</b>	<b>4865.20</b>
<b>8thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 8th year</b>		<b>4865.20</b>	<b>0.00</b>	<b>4865.20</b>
<b>9thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 9th year</b>		<b>4865.20</b>	<b>0.00</b>	<b>4865.20</b>
<b>10thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	4865.20	0.00	4865.20
<b>Total for 10th year</b>		<b>4865.20</b>	<b>0.00</b>	<b>4865.20</b>
<b>Grand Total :</b>		<b>163193.51</b>	<b>117804.43</b>	<b>280997.94</b>

**Note :-**

- (1) Seed sowing along fencing towards the inner side, and also in the plot.
- (2) Planting of cutting of ipomea//Glarcidia along the fencing towards outer side.



(B.J. Asari)  
Dy.Conservator of Forests  
Kutch West Division, Bhuj



**Compensatory Afforestation Scheme for Non forest land area**

Compensatory Afforestation Areas to be carried out in field of forest land to be diversion of 122.4077 Ha PF 2/4 Lining of Bhuj-Khavada-Dharmshala section NH-341 from km 65+185 in the State of Gujarat –Package II Forest Area-Proposal Reg.

Detailed scheme of Compensatory Afforestation for Non-forest area 4.5 ha.to be carried out in lieu of 122.4077 ha.of Protected forest land to be divert in Kutch district.

**1. Details of degraded land.**

Village	Bocha
Taluka	Mundra
Range	Mundra
District	Kutch
Division	Kutch East
Block/ Patal, Compartment No.	29/p.
Area to be afforested	4.5 Ha.
Working circle	

**2. Description of Area.**

Soil type	Black & Starey
Topography	Plain
Slope	Medium & Gentle
Whether the area is bearing any root stock of Vegetation	Yes

**3. Name of Plantation Programme:-**

Compensatory Afforestation Scheme for Non-Forest area.

**4. Schedule of Plantation Programme:-**

(i)	The Compensatory Afforestation on Non-Forest area would be started by Dy.Conservator of Forest Kutch East Division as early as possible after the proposal is formally approved.
(ii)	Compensatory Afforestation will be done in 4.50 ha.area. The total afforestation cost will be about <b>Rs.20, 43,581/-</b> Executive Engineer, National Highway Division, Gandhidham. has given an undertaking to pay the cost of Compensatory Afforestation as per the prevailing wages (including the price escalation and supervision charges).

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# Technical Details:-

Technical details of Compensatory Afforestation are as Follows:

Sr. No.	Details	Specifications															
a	General Details	The C.A. will be taken under Compensatory Afforestation for Non-Forest land. The prevailing wage rate is 310.40 per day.															
b	Spacing	3 X 3 mtr., 1111 plants per ha.															
c	Species to be planted (No. of plants per ha.)	<table> <tr> <td>Gundi</td><td>211</td><td rowspan="7">Minimum planting height will be 100 cm. at the time of planting. However it will vary for different species.</td></tr> <tr> <td>Neem</td><td>250</td></tr> <tr> <td>Pilu</td><td>225</td></tr> <tr> <td>Khijado</td><td>150</td></tr> <tr> <td>DeshiBaval</td><td>225</td></tr> <tr> <td>Chhini Lai(Tamarixaphylla)</td><td>50</td></tr> <tr> <td><b>Total</b></td><td><b>1111</b></td></tr> </table>	Gundi	211	Minimum planting height will be 100 cm. at the time of planting. However it will vary for different species.	Neem	250	Pilu	225	Khijado	150	DeshiBaval	225	Chhini Lai(Tamarixaphylla)	50	<b>Total</b>	<b>1111</b>
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d	Nursery Technique	Nine months old polypot raised plants will be planted at the onset of monsoon.															
e	Site Preparation	The malformed rootstock present in the area will be cutback & the site will be cleaned in the month of Nov-Dec. Alignment & pit digging 45 x 45 x 45 cms. will be carried out in the month of Dec-Jan.															
f	Plantation Method	Polypot raised plants will be planted during monsoon.															
g	Soil & Moisture Conservation Works	(i) Pucca structure like Check dam, check wall, retaining wall Contour trenches 2.00 x 0.45 x 0.30, 300 Nos/ha. will be dug along the contour line. The dug out soil will be heaped on the down ward side. Gully plugging & Nala Banding using the loose stone available in the area will be carried out as per requirement. Seeds of Jatropha, Agave plants ...etc. will be planted during monsoon in the upper side of nala as per suitability.															
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j	Maintenance	It is proposed to maintain the Plantation up to ten years.															



	Subsequent silvicultural Operation	Cleaning, cutbacks, thinning etc. (as per species specific requirement) will be carried out at the age as per prescribed in the working plan.
l	Proposed monitoring mechanism	<p>(i) A plantation register is to be maintained.</p> <p>(ii) Monitoring is to be done as per the following norms.</p> <p>Forester – 100%</p> <p>RFO – 100%</p> <p>ACF – 20%</p> <p>DCF – 10%</p> <p>(iii) The results of survival etc. are maintained in the plantation register on a periodical basis, which is updated at the end of September and March each year.</p> <p>(iv) The collar girth is also to be reordered at the end of each year.</p> <p>(v) At the end of maintenance period, the area is aimed at full stocking and pole crop girth for all the species, except bamboo.</p> <p>(vi) Bamboo would be of the harvestable size by the end of 4<sup>th</sup> year.</p> <p>(vii) Third party monitoring mechanism is also in the State and if the plantations in the sample selected, it will also be monitored by the third party selected for this purpose.</p>
m	Regeneration cleaning	Cut-back and promotion of root suckers.
n	Silviculture & other activities	Only afforestation aimed plantation will be taken up, as the area falls under degraded forest land.

(P.A.Vihol)

Dy Conservator of Forest  
Kachchh East Division, Bhuj.

The Compensatory Afforestation scheme at the cost of **Rs. 20,43,581/-** is technically and administrative approved by the undersigned.

(P.A.Vihol)

Dy Conservator of Forest  
Kachchh East Division, Bhuj.